CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT and AFFIDAVIT
Related to Contract/Amendment/Solicitation
EDS # 158299

SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting the EDS:

Lakeshore Recycling Systems, LLC

Enter d/b/a if applicable:

Pitstop

The Disclosing Party submitting this EDS is:

the Applicant

B. Business address of the Disclosing Party:

6132 W. Oakton Avenue
Morton Grove, IL 60053
United States

C. Telephone:

847-779-7500

Fax:

D. Name of contact person:

Mr. Scott Jansen

F. Brief description of contract, transaction or other undertaking (referred to below as the "Matter") to which this EDS pertains:

ACCEPTANCE AND PROCESSING OF MUNICIPAL SOLID WASTE DELIVERED BY THE CITY OF CHICAGO AT PRIVATELY OWNED TRANSFER STATIONS

G. Which City agency or department is requesting this EDS?

DEPT OF PROCUREMENT SERVICES

Specification Number

763731

Contract (PO) Number

110170

Revision Number

0

Release Number

0

User Department Project Number

SECTION II -- DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:

Limited liability company

Is the Disclosing Party incorporated or organized in the State of Illinois?

No

State or foreign country of incorporation or organization:

Delaware

Registered to do business in the State of Illinois as a foreign entity?

Yes

B. DISCLOSING PARTY IS A LEGAL ENTITY:

1.a.2 Does the Disclosing Party have any officers?

Yes

1.a.4 List below the full names and titles of all executive officers of the entity.

Title:	Chief Executive Officer
Officer:	Mr. Alan Handley
Role:	Officer
Title:	Managing Officer
Officer:	Mr. Richard Golf
Role:	Officer
Title:	Managing Officer
Officer:	Mr. Jerry Golf
Role:	Officer
Title:	Managing Officer
Officer:	Mr. Joshua Connell
Role:	Officer

B. CERTIFICATION REGARDING CONTROLLING INTEREST

1.b.1 Are there any individuals who directly or indirectly control the day-to-day management of the Disclosing Party as a general partner, managing member, manager, or other capacity?

No

1.b.3 Are there any legal entities that directly or indirectly control the day-to-day management of the Disclosing Party as a general partner, managing member, manager, or other capacity?

Yes

1.b.4 List all legal entities that function as general partners, managing members, managers, and any others who directly or indirectly control the day-to-day management of the Disclosing Party. Each legal entity listed below must submit an EDS on its own behalf.

Name:	LRS Holdings, LLC
Title:	

Business Address:	6132 Oakton Street Morton Grove, 60053 United States

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2. Ownership Information

Please provide ownership information concerning each person or entity that holds, or is anticipated to hold (see next paragraph), a direct or indirect beneficial interest in excess of 7.5% of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a limited liability company, or interest of a beneficiary of a trust, estate, or other similar entity. Note: Each legal entity below may be required to submit an EDS on its own behalf.

Please disclose present owners below. Please disclose anticipated owners in an attachment submitted through the "Additional Info" tab. "Anticipated owner" means an individual or entity in existence at the time application for City action is made, which is not an applicant or owner at such time, but which the applicant expects to assume a legal status, within six months of the time the City action occurs, that would render such individual or entity an applicant or owner if they had held such legal status at the time application was made.

- LRS Holdings, LLC - 100.0% - EDS 158300
  - Lakeshore Waste Services LLC - 34.4% - EDS 158301
  - Recycling Systems, Inc. - 34.4% - EDS 158302
  - Goldman Sachs & Co. LLC - 10.2% - EDS 158303

Owner Details

Name	Business Address
Goldman Sachs & Co. LLC	200 West Street 26th Floor New York, NY United States
Lakeshore Waste Services LLC	6132 Oakton Street Morton Grove, IL United States
LRS Holdings, LLC	6132 W. Oakton Avenue Morton Grove, IL United States
Recycling Systems, Inc.	6132 W. Oakton Avenue

Morton Grove, IL

United States

SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

A. Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS?

No

B. Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS?

No

D. Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code ("MCC")) in the Disclosing Party?

No

SECTION IV -- DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll.

If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

1. Has the Disclosing Party retained or does it anticipate retaining any legal entities in connection with the Matter?

Yes

2. List below the names of all legal entities which are retained parties.

Name:	Petromex, Inc.
Anticipated/Retained:	Retained
Business Address:	14702 S. Hamlin Avenue Midlothian, IL 60445 United States
Relationship:	Subcontractor - MWDBE
Fees ($$ or %):	7.0%
Estimated/Paid:	Estimated

Name:	E King Construction Co, Inc.
Anticipated/Retained:	Retained
Business Address:	3865 N. Columbus Avenue 2nd Floor Chicago, IL 60652 United States
Relationship:	Subcontractor - MWDBE
Fees ($$ or %):	10.0%
Estimated/Paid:	Estimated

Name:	DisposAll Waste Services, LLC
Anticipated/Retained:	Retained
Business Address:	5817 W. Odgen Avenue Cicero, IL 60804 United States
Relationship:	Subcontractor - MWDBE
Fees ($$ or %):	5.0%
Estimated/Paid:	Estimated

3. Has the Disclosing Party retained or does it anticipate retaining any persons in connection with the Matter?

No

SECTION V -- CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage of any child support obligations by any Illinois court of competent jurisdiction?

No

B. FURTHER CERTIFICATIONS

1. [This certification applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e. an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

I certify the above to be true

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

I certify the above to be true

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;
c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;
d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and

e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

I certify the above to be true

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapter 2-56 (Inspector General) and Chapter 2-156 (Governmental Ethics).

I certify the above to be true

5. Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;
b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or
d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

I certify the above to be true

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of

- bid-rigging in violation of 720 ILCS 5/33E-3;
- bid-rotating in violation of 720 ILCS 5/33E-4; or
- any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

I certify the above to be true

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

I certify the above to be true

8. [FOR APPLICANT ONLY]

i. Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency" ; and
ii. the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City.

NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.

I certify the above to be true

9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM")

I certify the above to be true

10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/ subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.

I certify the above to be true

11. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago.

None

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS,

to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

The Disclosing Party certifies, as defined in MCC Section 2-32-455(b), the Disclosing Party

is not a "financial institution"

D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?

No

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

If the Disclosing Party cannot make this verification, the Disclosing Party must disclose all required information in the space provided below or in an attachment in the "Additional Info" tab. Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

I can make the above verification

SECTION VI -- CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

Is the Matter federally funded? For the purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

No

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

I acknowledge and consent to the above

The Disclosing Party understands and agrees that:

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information

contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

I acknowledge and consent to the above

APPENDIX A - FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.1.a, if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

No

APPENDIX B - BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

No

APPENDIX C-PROHIBITION ON WAGE & SALARY HISTORY SCREENING

This Appendix is to be completed only by an Applicant that is completing this EDS as a "contractor" as defined in MCC Section 2-92-385. That section, which should be consulted (www.amlegal.com), generally covers a party to any agreement pursuant to which they: (i) receive City of Chicago funds in consideration for services, work or goods provided (including for legal or other professional services), or (ii) pay the City money for a license, grant or concession allowing them to conduct a business on City premises.

On behalf of an Applicant that is a contractor pursuant to MCC Section 2-92-385, I hereby certify that the Applicant is in compliance with MCC Section 2-92-385(b)(1) and (2), which prohibit: (i) screening job applicants based on their wage or salary history, or (ii) seeking job applicants' wage or salary history from current or former employers. I also certify that the Applicant has adopted a policy that includes those prohibitions.

This certification shall serve as the affidavit required by MCC Section 2-92-385(c)(1).

Yes

ADDITIONAL INFO

Please add any additional explanatory information here. If explanation is longer than 1000 characters, you may add an attachment below. Please note that your EDS, including all attachments, becomes available for public viewing upon contract award.

Your attachments will be viewable "as is" without manual redaction by the City. You are responsible for redacting any non-public information from your documents before uploading.

List of vendor attachments uploaded by City staff

10-K Goldman Sachs
Goldman Sachs Statement

List of attachments uploaded by vendor

None.

CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and all applicable appendices, on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and all applicable appendices, are true, accurate and complete as of the date furnished to the City. Submission of this form constitutes making the oath associated with notarization.

/s/ 12/30/2020
Mr. Scott Jansen
Financial Planning and Analysis
Lakeshore Recycling Systems, LLC

This is a printed copy of the Economic Disclosure Statement, the original of which is filed electronically with the City of Chicago. Any alterations must be made electronically, alterations on this printed copy are void and of no effect.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018 Commission File Number: 001-14965

The Goldman Sachs Group, Inc.

(Exact name of registrant as specified in its charter)

Delaware	13-4019460
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
200 West Street New York, N.Y. (Address of principal executive offices)	10282 (Zip Code)

(212) 902-1000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class:	Name of each exchange on which registered:
Common stock, par value $.01 per share	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of Floating Rate Non-Cumulative Preferred Stock, Series A	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of 6.20% Non-Cumulative Preferred Stock, Series B	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of Floating Rate Non-Cumulative Preferred Stock, Series C	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of Floating Rate Non-Cumulative Preferred Stock, Series D	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of 5.50% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series J	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of 6.375% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K	**New York Stock Exchange**
Depository Shares, Each Representing 1/1,000th Interest in a Share of 6.30% Non-Cumulative Preferred Stock, Series N	**New York Stock Exchange**
See Exhibit 99.2 for debt and trust securities registered under Section 12(b) of the Act	

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☒ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. ☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐
Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

As of June 30, 2018, the aggregate market value of the common stock of the registrant held by non-affiliates of the registrant was approximately $82.2 billion.

As of February 8, 2019, there were 368,272,261 shares of the registrant's common stock outstanding.

Documents incorporated by reference: Portions of The Goldman Sachs Group, Inc.'s Proxy Statement for its 2019 Annual Meeting of Shareholders are incorporated by reference in the Annual Report on Form 10-K in response to Part III, Items 10, 11, 12, 13 and 14.

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PART I

Item 1. Business

Introduction

Goldman Sachs is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals.

When we use the terms "Goldman Sachs," "the firm," "we," "us" and "our," we mean The Goldman Sachs Group, Inc. (Group Inc. or parent company), a Delaware corporation, and its consolidated subsidiaries.

References to "this Form 10-K" are to our Annual Report on Form 10-K for the year ended December 31, 2018. All references to 2018, 2017 and 2016 refer to our years ended, or the dates, as the context requires, December 31, 2018, December 31, 2017 and December 31, 2016, respectively.

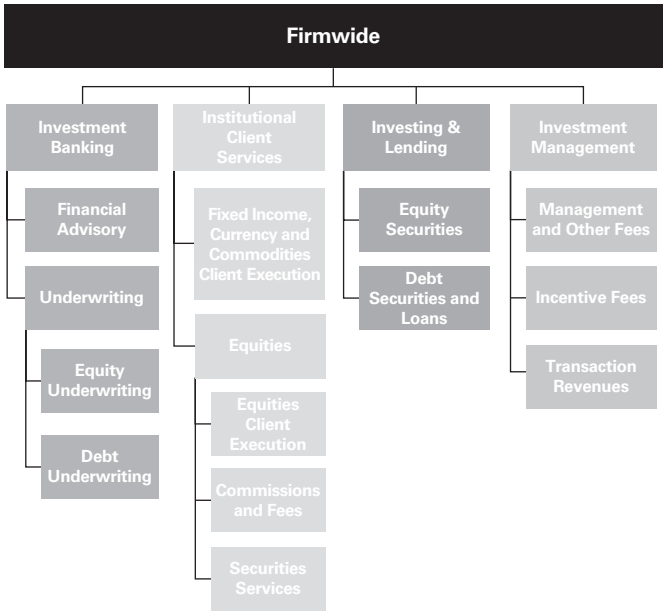
Group Inc. is a bank holding company (BHC) and a financial holding company (FHC) regulated by the Board of Governors of the Federal Reserve System (FRB). Our U.S. depository institution subsidiary, Goldman Sachs Bank USA (GS Bank USA), is a New York State-chartered bank.

As of December 2018, we had offices in over 30 countries and 46% of our headcount was based outside the Americas. Our clients are located worldwide and we are an active participant in financial markets around the world.

Our Business Segments

We report our activities in four business segments: Investment Banking, Institutional Client Services, Investing & Lending and Investment Management.

The chart below presents our four business segments.



Investment Banking

Investment Banking serves public and private sector clients around the world. We provide financial advisory services and help companies raise capital to strengthen and grow their businesses. We seek to develop and maintain long-term relationships with a diverse global group of institutional clients, including corporates, governments, states and municipalities. Our goal is to deliver to our institutional clients the entire resources of the firm in a seamless fashion, with investment banking serving as the main initial point of contact with Goldman Sachs.

Financial Advisory. We are a leader in providing financial advisory services, including strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs and risk management. In particular, we help clients execute large, complex transactions for which we provide multiple services, including cross-border structuring expertise. Financial Advisory also includes revenues from derivative transactions directly related to these client advisory assignments. We also assist our clients in managing their asset and liability exposures and their capital.

Underwriting. The other core activity of Investment Banking is helping companies raise capital to fund their businesses. As a financial intermediary, our job is to match the capital of our investing clients, who aim to grow the savings of millions of people, with the needs of our public and private sector clients, who need financing to generate growth, create jobs and deliver products and services. Our underwriting activities include public offerings and private placements, including local and cross-border transactions and acquisition financing, of a wide range of securities and other financial instruments, including loans. Underwriting also includes revenues from derivative transactions entered into with public and private sector clients in connection with our underwriting activities.

Equity Underwriting. We underwrite common and preferred stock and convertible and exchangeable securities. We regularly receive mandates for large, complex transactions and have held a leading position in worldwide public common stock offerings and worldwide initial public offerings for many years.

Debt Underwriting. We underwrite and originate various types of debt instruments, including investment-grade and high-yield debt, bank loans and bridge loans, including in connection with acquisition financing, and emerging- and growth-market debt, which may be issued by, among others, corporate, sovereign, municipal and agency issuers. In addition, we underwrite and originate structured securities, which include mortgage-related securities and other asset-backed securities.

Institutional Client Services

Institutional Client Services serves our clients who come to us to buy and sell financial products, raise funding and manage risk. We do this by acting as a market maker and offering market expertise on a global basis. Institutional Client Services makes markets and facilitates client transactions in fixed income, equity, currency and commodity products. In addition, we make markets in and clear client transactions on major stock, options and futures exchanges worldwide.

As a market maker, we provide prices to clients globally across thousands of products in all major asset classes and markets. At times we take the other side of transactions ourselves if a buyer or seller is not readily available and at other times we connect our clients to other parties who want to transact. Our willingness to make markets, commit capital and take risk in a broad range of products is crucial to our client relationships. Market makers provide liquidity and play a critical role in price discovery, which contributes to the overall efficiency of the capital markets.

Our clients are primarily institutions that are professional market participants, including investment entities whose ultimate clients include individual investors investing for their retirement, buying insurance or putting aside surplus cash in a deposit account.

Through our global sales force, we maintain relationships with our clients, receiving orders and distributing investment research, trading ideas, market information and analysis. Much of this connectivity between us and our clients is maintained on technology platforms and operates globally wherever and whenever markets are open for trading.

Institutional Client Services and our other businesses are supported by our Global Investment Research division, which, as of December 2018, provided fundamental research on approximately 3,000 companies worldwide and more than 40 national economies, as well as on industries, currencies and commodities.

Institutional Client Services generates revenues from the following activities:

- In large, highly liquid markets (such as markets for U.S. Treasury bills, large capitalization S&P 500 Index stocks or certain mortgage pass-through securities), we execute a high volume of transactions for our clients;
- In less liquid markets (such as mid-cap corporate bonds, growth market currencies or certain non-agency mortgage-backed securities), we execute transactions for our clients for spreads and fees that are generally somewhat larger than those charged in more liquid markets;
- We also structure and execute transactions involving customized or tailor-made products that address our clients' risk exposures, investment objectives or other complex needs (such as a jet fuel hedge for an airline);
- We provide financing to our clients for their securities trading activities, as well as securities lending and other prime brokerage services; and
- In connection with our market-making activities, we maintain inventory, typically for a short period of time, in response to, or in anticipation of, client demand. We also hold inventory to actively manage our risk exposures that arise from these market-making activities. We carry our inventory at fair value with changes in valuation reflected in net revenues.

Institutional Client Services activities are organized by asset class and include both "cash" and "derivative" instruments. "Cash" refers to trading the underlying instrument (such as a stock, bond or barrel of oil). "Derivative" refers to instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors (such as an option, which is the right or obligation to buy or sell a certain bond, stock or other asset on a specified date in the future at a certain price, or an interest rate swap, which is the agreement to convert a fixed rate of interest into a floating rate or vice versa).

Fixed Income, Currency and Commodities Client Execution. Includes client execution activities related to making markets in both cash and derivative instruments for interest rate products, credit products, mortgages, currencies and commodities.

- **Interest Rate Products.** Government bonds (including inflation-linked securities) across maturities, other government-backed securities, securities sold under agreements to repurchase (repurchase agreements), and interest rate swaps, options and other derivatives.
- **Credit Products.** Investment-grade corporate securities, high-yield securities, credit derivatives, exchange-traded funds, bank and bridge loans, municipal securities, emerging market and distressed debt, and trade claims.
- **Mortgages.** Commercial mortgage-related securities, loans and derivatives, residential mortgage-related securities, loans and derivatives (including U.S. government agency-issued collateralized mortgage obligations and other securities and loans), and other asset-backed securities, loans and derivatives.
- **Currencies.** Currency options, spot/forwards and other derivatives on G-10 currencies and emerging-market products.
- **Commodities.** Commodity derivatives and, to a lesser extent, physical commodities, involving crude oil and petroleum products, natural gas, base, precious and other metals, electricity, coal, agricultural and other commodity products.

Equities. Includes equities client execution, commissions and fees, and securities services.

Equities Client Execution. We make markets in equity securities and equity-related products, including exchange-traded funds, convertible securities, options, futures and over-the-counter (OTC) derivative instruments, on a global basis. As a principal, we facilitate client transactions by providing liquidity to our clients, including with large blocks of stocks or derivatives, requiring the commitment of our capital.

We also structure and make markets in derivatives on indices, industry groups, financial measures and individual company stocks. We develop strategies and provide information about portfolio hedging and restructuring and asset allocation transactions for our clients. We also work with our clients to create specially tailored instruments to enable sophisticated investors to establish or liquidate investment positions or undertake hedging strategies. We are one of the leading participants in the trading and development of equity derivative instruments.

Our exchange-based market-making activities include making markets in stocks and exchange-traded funds, futures and options on major exchanges worldwide.

Commissions and Fees. We generate commissions and fees from executing and clearing institutional client transactions on major stock, options and futures exchanges worldwide, as well as OTC transactions. We provide our clients with access to a broad spectrum of equity execution services, including electronic "low-touch" access and more complex "high-touch" execution through both traditional and electronic platforms.

Securities Services. Includes financing, securities lending and other prime brokerage services.

- **Financing Services.** We provide financing to our clients for their securities trading activities through margin loans that are collateralized by securities, cash or other acceptable collateral. We earn a spread equal to the difference between the amount we pay for funds and the amount we receive from our client.
- **Securities Lending Services.** We provide services that principally involve borrowing and lending securities to cover institutional clients' short sales and borrowing securities to cover our short sales and otherwise to make deliveries into the market. In addition, we are an active participant in broker-to-broker securities lending and third-party agency lending activities.
- **Other Prime Brokerage Services.** We earn fees by providing clearing, settlement and custody services globally. In addition, we provide our hedge fund and other clients with a technology platform and reporting which enables them to monitor their security portfolios and manage risk exposures.

Investing & Lending

Our investing and lending activities, which are typically longer-term, include activities across various asset classes, primarily debt securities and loans, public and private equity securities, infrastructure and real estate. These activities include making investments, some of which are consolidated, through our Merchant Banking business and our Special Situations Group. Some of these investments are made indirectly through funds that we manage. We also provide financing to corporate clients and individuals, including bank loans, personal loans and mortgages.

Equity Securities. We make corporate, real estate, infrastructure and other equity-related investments.

Debt Securities and Loans. We make corporate, real estate, infrastructure and other debt investments. In addition, we provide financing to clients through loan facilities and through secured loans, including secured loans through our digital platform, *Goldman Sachs Private Bank Select*. We also make unsecured loans and accept deposits through our digital platform, *Marcus: by Goldman Sachs*.

Investment Management

Investment Management provides investment and wealth advisory services to help clients preserve and grow their financial assets. We provide these services to our institutional and high-net-worth individual clients, as well as investors who primarily access our products through a network of third-party distributors around the world.

We manage client assets across a broad range of investment strategies and asset classes, including equity, fixed income and alternative investments. Alternative investments primarily includes hedge funds, credit funds, private equity, real estate, currencies, commodities and asset allocation strategies. Our investment offerings include those managed on a fiduciary basis by our portfolio managers, as well as strategies managed by third-party managers. We offer our investments in a variety of structures, including separately managed accounts, mutual funds, private partnerships and other commingled vehicles.

We also provide customized investment advisory solutions designed to address our clients' investment needs. These solutions begin with identifying clients' objectives and continue through portfolio construction, ongoing asset allocation and risk management and investment realization. We draw from a variety of third-party managers, as well as our proprietary offerings to implement solutions for clients.

We supplement our investment advisory solutions for high-net-worth individuals with wealth advisory services that include income and liability management, trust and estate planning, philanthropic giving and tax planning. We also use our global securities and derivatives market-making capabilities to address clients' specific investment needs.

Management and Other Fees. The majority of revenues in management and other fees consists of asset-based fees on client assets. The fees that we charge vary by asset class, distribution channel and the type of services provided, and are affected by investment performance, as well as asset inflows and redemptions. Other fees we receive primarily include financial planning and counseling fees generated through wealth advisory services provided by our subsidiary, The Ayco Company, L.P.

Assets under supervision include client assets where we earn a fee for managing assets on a discretionary basis. This includes net assets in our mutual funds, hedge funds, credit funds and private equity funds (including real estate funds), and separately managed accounts for institutional and individual investors. Assets under supervision also include client assets invested with third-party managers, bank deposits and advisory relationships where we earn a fee for advisory and other services, but do not have investment discretion. Assets under supervision do not include the self-directed brokerage assets of our clients. Long-term assets under supervision represent assets under supervision excluding liquidity products. Liquidity products represent money market and bank deposit assets.

Incentive Fees. In certain circumstances, we are also entitled to receive incentive fees based on a percentage of a fund's or a separately managed account's return, or when the return exceeds a specified benchmark or other performance targets. Such fees include overrides, which consist of the increased share of the income and gains derived primarily from our private equity and credit funds when the return on a fund's investments over the life of the fund exceeds certain threshold returns.

Transaction Revenues. We receive commissions and net spreads for facilitating transactional activity in high-net-worth individual accounts. In addition, we earn net interest income primarily associated with client deposits and margin lending activity undertaken by such clients.

Business Continuity and Information Security

Business continuity and information security, including cyber security, are high priorities for Goldman Sachs. Their importance has been highlighted by numerous highly publicized events in recent years, including (i) cyber attacks against financial institutions, governmental agencies, large consumer-based companies and other organizations that resulted in the unauthorized disclosure of personal information of clients and customers and other sensitive or confidential information, the theft and destruction of corporate information and requests for ransom payments, and (ii) extreme weather events.

Our Business Continuity & Technology Resilience Program has been developed to provide reasonable assurance of business continuity in the event of disruptions at our critical facilities or systems and to comply with regulatory requirements, including those of FINRA. Because we are a BHC, our Business Continuity & Technology Resilience Program is also subject to review by the FRB. The key elements of the program are crisis management, business continuity, technology resilience, business recovery, assurance and verification, and process improvement. In the area of information security, we have developed and implemented a framework of principles, policies and technology designed to protect the information provided to us by our clients and our own information from cyber attacks and other misappropriation, corruption or loss. Safeguards are designed to maintain the confidentiality, integrity and availability of information.

Employees

Management believes that a major strength and principal reason for the success of Goldman Sachs is the quality and dedication of our people and the shared sense of being part of a team. We strive to maintain a work environment that fosters professionalism, excellence, diversity, cooperation among our employees worldwide and high standards of business ethics.

Instilling the Goldman Sachs culture in all employees is a continuous process, in which training plays an important part. All employees are offered the opportunity to participate in education and periodic seminars that we sponsor at various locations throughout the world. Another important part of instilling the Goldman Sachs culture is our employee review process. Employees are reviewed by supervisors, co-workers and employees they supervise in a 360-degree review process that is integral to our team approach, and which includes an evaluation of an employee's performance with respect to risk management, compliance and diversity. As of December 2018, we had headcount of 36,600.

Competition

The financial services industry and all of our businesses are intensely competitive, and we expect them to remain so. Our competitors are other entities that provide investment banking, market-making and investment management services, and commercial and/or consumer lending and deposit-taking products, as well as those entities that make investments in securities, commodities, derivatives, real estate, loans and other financial assets. These entities include brokers and dealers, investment banking firms, commercial banks, insurance companies, investment advisers, mutual funds, hedge funds, private equity funds, merchant banks, consumer finance companies and financial technology and other internet-based companies. We compete with some entities globally and with others on a regional, product or niche basis. We compete based on a number of factors, including transaction execution, products and services, innovation, reputation and price.

We have faced, and expect to continue to face, pressure to retain market share by committing capital to businesses or transactions on terms that offer returns that may not be commensurate with their risks. In particular, corporate clients seek such commitments (such as agreements to participate in their loan facilities) from financial services firms in connection with investment banking and other assignments.

Consolidation and convergence have significantly increased the capital base and geographic reach of some of our competitors, and have also hastened the globalization of the securities and other financial services markets. As a result, we have had to commit capital to support our international operations and to execute large global transactions. To take advantage of some of our most significant opportunities, we will have to compete successfully with financial institutions that are larger and have more capital and that may have a stronger local presence and longer operating history outside the U.S.

We also compete with smaller institutions that offer more targeted services, such as independent advisory firms. Some clients may perceive these firms to be less susceptible to potential conflicts of interest than we are, and, as described below, our ability to effectively compete with them could be affected by regulations and limitations on activities that apply to us but may not apply to them.

A number of our businesses are subject to intense price competition. Efforts by our competitors to gain market share have resulted in pricing pressure in our investment banking and market-making businesses, and could result in pricing pressure in other of our businesses. For example, the increasing volume of trades executed electronically, through the internet and through alternative trading systems, has increased the pressure on trading commissions, in that commissions for electronic trading are generally lower than for non-electronic trading. It appears that this trend toward low-commission trading will continue. Price competition has also led to compression in the difference between the price at which a market participant is willing to sell an instrument and the price at which another market participant is willing to buy it (i.e., bid/offer spread), which has affected our market-making businesses. In addition, we believe that we will continue to experience competitive pressures in these and other areas in the future as some of our competitors seek to obtain market share by further reducing prices, and as we enter into or expand our presence in markets that may rely more heavily on electronic trading and execution.

We also compete on the basis of the types of financial products that we and our competitors offer. In some circumstances, our competitors may offer financial products that we do not offer and that our clients may prefer.

The provisions of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), the requirements promulgated by the Basel Committee on Banking Supervision (Basel Committee) and other financial regulation could affect our competitive position to the extent that limitations on activities, increased fees and compliance costs or other regulatory requirements do not apply, or do not apply equally, to all of our competitors or are not implemented uniformly across different jurisdictions. For example, the provisions of the Dodd-Frank Act that prohibit proprietary trading and restrict investments in certain hedge and private equity funds differentiate between U.S.-based and non-U.S.-based banking organizations and give non-U.S.-based banking organizations greater flexibility to trade outside of the U.S. and to form and invest in funds outside the U.S.

Likewise, the obligations with respect to derivative transactions under Title VII of the Dodd-Frank Act depend, in part, on the location of the counterparties to the transaction. The impact of the Dodd-Frank Act and other regulatory developments on our competitive position will depend to a large extent on the manner in which the required rulemaking and regulatory guidance evolve, the extent of international convergence, and the development of market practice and structures under the new regulatory regimes as described further in "Regulation" below.

We also face intense competition in attracting and retaining qualified employees. Our ability to continue to compete effectively will depend upon our ability to attract new employees, retain and motivate our existing employees and to continue to compensate employees competitively amid intense public and regulatory scrutiny on the compensation practices of large financial institutions. Our pay practices and those of certain of our competitors are subject to review by, and the standards of, the FRB and other regulators inside and outside the U.S., including the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) in the U.K. We also compete for employees with institutions whose pay practices are not subject to regulatory oversight. See "Regulation — Compensation Practices" and "Risk Factors — Our businesses may be adversely affected if we are unable to hire and retain qualified employees" in Part I, Item 1A of this Form 10-K for further information about such regulation.

Regulation

As a participant in the global financial services industry, we are subject to extensive regulation and supervision worldwide. The Dodd-Frank Act, and the rules thereunder, significantly altered the U.S. financial regulatory regime within which we operate and the Markets in Financial Instruments Regulation and Markets in Financial Instruments Directive (collectively, MiFID II) have significantly revised the regulatory regime for our European operations. The Basel Committee's framework for strengthening the regulation, supervision and risk management of banks (Basel III), is implemented by the FRB, the PRA and other national regulators. The Basel Committee is the primary global standard setter for prudential bank regulation. However, its standards are not effective in any jurisdiction until rules implementing such standards have been implemented by the relevant regulators. The implications of such regulations for our businesses depend to a large extent on their implementation by the relevant regulators globally, and the market practices and structures that develop.

In 2017 and 2018, the U.S. Department of the Treasury, in response to an executive order issued by the President of the U.S., issued four reports recommending a number of comprehensive changes to the regulatory systems applicable in the U.S. to banks and other financial institutions.

Other reforms have been adopted or are being considered by regulators and policy makers worldwide, as described below. Recent developments have added additional uncertainty to the implementation, scope and timing of regulatory reforms and potential for deregulation in some areas. The effects of any changes to the regulations affecting our businesses, including as a result of the proposals described below, are uncertain and will not be known until the changes are finalized and market practices and structures develop under the revised regulations.

Goldman Sachs International (GSI), Goldman Sachs International Bank (GSIB) and Goldman Sachs Asset Management International (GSAMI), our principal E.U. operating subsidiaries, are incorporated and headquartered in the U.K. and, as such, are currently subject to E.U. legal and regulatory requirements, based on directly binding regulations of the E.U. and the implementation of E.U. directives by the U.K. They all currently benefit from non-discriminatory access to E.U. clients and infrastructure based on E.U. treaties and E.U. legislation, including cross-border "passporting" arrangements and specific arrangements for the establishment of E.U. branches. As a result of the U.K.'s notification to the European Council of its decision to leave the E.U. (Brexit), there is considerable uncertainty as to the regulatory regime that will be applicable in the U.K. and the regulatory framework that will govern transactions and business undertaken by our U.K. subsidiaries in the remaining E.U. countries. The U.K.'s European Union (Withdrawal) Act 2018 aims to preserve the direct and operative E.U. law governing the requirements on U.K. financial service providers as English law beginning March 29, 2019. References to E.U. regulations that are in effect in the U.K. as of March 29, 2019 may apply to our U.K. subsidiaries following Brexit. In addition, proposals by the Basel Committee or the E.U. may be implemented in the U.K. and apply to our U.K. subsidiaries.

Pursuant to an agreement endorsed by the E.U. and U.K. leaders in November (Withdrawal Agreement), the existing access arrangements for financial services would continue unchanged until the end of 2020, with potential for one further extension of up to two years, subsequent to which a new trade relationship may be established between the E.U. and the U.K. While the parties have issued a political declaration on the outline of such co-operation, the exact terms of that future relationship, including the exact terms of access to each other's financial markets remain subject to future negotiation. If the Withdrawal Agreement is not ratified, beginning March 29, 2019, the date on which the U.K. is scheduled to leave the E.U., firms established in the U.K., including our U.K. subsidiaries, would lose their pan-E.U. "passports" and generally be treated like entities in countries outside the E.U. They may, however, benefit from emergency measures, including those that several E.U. member states have introduced so that existing contractual arrangements are not disrupted, in order to minimize any impact on existing transactions. The E.U. has also provided interim recognition to U.K. clearing houses so that E.U. clients can continue to access them.

Banking Supervision and Regulation

Group Inc. is a BHC under the U.S. Bank Holding Company Act of 1956 (BHC Act) and an FHC under amendments to the BHC Act effected by the U.S. Gramm-Leach-Bliley Act of 1999 (GLB Act), and is subject to supervision and examination by the FRB, which is our primary regulator.

Under the system of "functional regulation" established under the BHC Act, the primary regulators of our U.S. non-bank subsidiaries directly regulate the activities of those subsidiaries, with the FRB exercising a supervisory role. Such "functionally regulated" subsidiaries include broker-dealers registered with the SEC, such as our principal U.S. broker-dealer, Goldman Sachs & Co. LLC (GS&Co.), entities registered with or regulated by the CFTC with respect to futures-related and swaps-related activities and investment advisers registered with the SEC with respect to their investment advisory activities.

In November 2018, the FRB issued a final rule establishing a new rating system for large financial institutions, such as us. The new rating system is intended to align with the FRB's existing supervisory program for large financial institutions and includes component ratings for capital planning, liquidity risk management, and governance and controls. The FRB has also proposed related guidance for the governance and controls component.

Our principal U.S. bank subsidiary, GS Bank USA, is supervised and regulated by the FRB, the FDIC, the New York State Department of Financial Services (NYDFS) and the Bureau of Consumer Financial Protection. A number of our activities are conducted partially or entirely through GS Bank USA and its subsidiaries, including: origination of bank loans; personal loans and mortgages; interest rate, credit, currency and other derivatives; leveraged finance; deposit-taking; and agency lending. Our consumer-oriented activities are subject to extensive regulation and supervision by federal and state regulators with regard to consumer protection laws, including laws relating to fair lending and other practices in connection with marketing and providing consumer financial products.

Certain of our subsidiaries are regulated by the banking and securities regulatory authorities of the countries in which they operate. As described below, our E.U. subsidiaries, including our U.K. subsidiaries, are subject to various European regulations, as well as national laws, which to some extent implement European directives.

GSI, our U.K. broker-dealer subsidiary and a designated investment firm, and GSIB, our U.K. bank subsidiary, are regulated by the PRA and the FCA. GSI provides broker-dealer services in and from the U.K., and GSIB acts as a primary dealer for European government bonds and is involved in market making in European government bonds, lending (including securities lending) and deposit-taking activities. GSIB's consumer-oriented deposit-taking activities are subject to U.K. consumer protection regulations. Goldman Sachs Bank Europe SE ("GSBE," formerly Goldman Sachs AG), our German bank subsidiary, is regulated by the BaFin and Deutsche Bundesbank within the context of the European Single Supervisory Mechanism. In addition, in December 2018, our German subsidiary, Goldman Sachs Europe SE, was approved by BaFin as an authorized investment firm, which will allow it to conduct certain activities (such as activities related to physical commodities) which GSBE may be prevented from undertaking.

Capital and Liquidity Requirements. We and GS Bank USA are subject to regulatory risk-based capital and leverage requirements that are calculated in accordance with the regulations of the FRB (Capital Framework). The Capital Framework is largely based on Basel III and also implements certain provisions of the Dodd-Frank Act. Under the Capital Framework, we and GS Bank USA are "Advanced approach" banking organizations. We have also been designated as a global systemically important bank (G-SIB). Under the FRB's capital adequacy requirements, we and GS Bank USA must meet specific regulatory capital requirements that involve quantitative measures of assets, liabilities and certain off-balance-sheet items. The sufficiency of our capital levels is also subject to qualitative judgments by regulators. We and GS Bank USA are also subject to liquidity requirements established by the U.S. federal bank regulatory agencies.

In October 2018, the FRB released two proposals that would generally make the applicable capital and liquidity requirements less stringent for large U.S. banking organizations other than those that are U.S. G-SIBs, such as us.

GSI and GSIB are subject to capital requirements prescribed in the E.U. Capital Requirements Regulation (CRR) and the E.U. Fourth Capital Requirements Directive (CRD IV). GSI and GSIB are subject to liquidity requirements established by U.K. regulatory authorities that are similar to those applicable to GS Bank USA and us.

Risk-Based Capital Ratios. The Capital Framework provides for an additional capital ratio requirement that consists of three components: (i) for capital conservation (capital conservation buffer), (ii) for countercyclicality (countercyclical capital buffer) and (iii) as a consequence of our designation as a G-SIB (G-SIB buffer). The additional capital ratio requirement must be satisfied entirely with capital that qualifies as Common Equity Tier 1 (CET1). GS Bank USA is subject to the first two components of the additional capital ratio requirement discussed above.

The capital conservation buffer and G-SIB buffer began to phase in on January 1, 2016 and continued to do so through January 1, 2019. In April 2018, the FRB proposed a rule that would, among other things, replace the capital conservation buffer with a stress capital buffer (SCB) requirement for large BHCs subject to the FRB's Comprehensive Capital Analysis and Review (CCAR). See "Regulation — Banking Supervision and Regulation — Stress Tests" for further information about this proposed rule.

The countercyclical capital buffer is designed to counteract systemic vulnerabilities and currently applies only to "Advanced approach" banking organizations. Several other national supervisors also require countercyclical capital buffers. The G-SIB and countercyclical capital buffers applicable to us could change in the future and, as a result, the minimum capital ratios to which we are subject could change.

In December 2018, the U.S. federal bank regulatory agencies issued a final rule that would provide an optional three-year phase-in period for the day-one regulatory capital effects of the adoption of the Current Expected Credit Losses (CECL) accounting standard. The FRB also released a statement indicating that it will not incorporate CECL into the calculation of the allowance for credit losses in supervisory stress tests through the 2021 stress test cycle. See Note 3 to the consolidated financial statements in Part II, Item 8 of this Form 10-K for further information about CECL.

In October 2018, the U.S. federal bank regulatory agencies issued a proposed rule that would implement the Basel Committee's standardized approach for measuring counterparty credit risk exposures in connection with derivative contracts (SA-CCR). Under the proposal, "Advanced approach" banking organizations would be required to use SA-CCR for purposes of calculating their standardized risk-weighted assets (RWAs) and, with some adjustments, for purposes of determining their supplementary leverage ratios (SLRs) discussed below.

The Basel Committee has published final guidelines for calculating incremental capital ratio requirements for banking institutions that are systemically significant from a domestic but not global perspective (D-SIBs). If these guidelines are implemented by national regulators, they will apply, among others, to certain subsidiaries of G-SIBs. These guidelines are in addition to the framework for G-SIBs, but are more principles-based. CRD IV and the CRR provide that institutions that are systemically important at the E.U. or member state level, known as other systemically important institutions (O-SIIs), may be subject to additional capital ratio requirements of up to 2% of CET1, according to their degree of systemic importance (O-SII buffers). O-SIIs are identified annually, along with their applicable buffers. The PRA has identified Goldman Sachs Group UK Limited (GSG UK), the parent company of GSI and GSIB, as an O-SII. GSG UK's O-SII buffer is currently set at zero percent.

In January 2019, the Basel Committee finalized revisions to the framework for calculating capital requirements for market risk, which is expected to increase market risk capital requirements for most banking organizations, although to a lesser degree than the version of the framework issued in January 2016. The revised framework, among other things, revises the standardized approach and internal models to calculate market risk requirements and clarifies the scope of positions subject to market risk capital requirements. The Basel Committee has proposed that national regulators implement the revised framework beginning January 1, 2022. The U.S. federal bank regulatory agencies and the European Commission have not yet proposed rules implementing the 2019 version of the revised market risk framework for the U.S. and E.U. financial institutions, respectively.

In December 2017, the Basel Committee published standards that it described as the finalization of the Basel III post-crisis regulatory reforms. These standards set a floor on internally modeled capital requirements at a percentage of the capital requirements under the standardized approach. They also revise the Basel Committee's standardized and model-based approaches for credit risk, provide a new standardized approach for operational risk capital and revise the frameworks for credit valuation adjustment risk. The Basel Committee has proposed that national regulators implement these standards beginning January 1, 2022, and that the new floor be phased in through January 1, 2027.

The Basel Committee has also published updated frameworks relating to Pillar 3 disclosure requirements and the regulatory capital treatment of securitization exposures and a revised G-SIB assessment methodology. The U.S. federal bank regulatory agencies have not yet proposed rules implementing the December 2017 standards for purposes of risk-based capital ratios or the Basel Committee frameworks.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Equity Capital Management and Regulatory Capital" in Part II, Item 7 of this Form 10-K and Note 20 to the consolidated financial statements in Part II, Item 8 of this Form 10-K for information about the capital ratios of the firm, GS Bank USA and GSI.

As described in "Other Restrictions" below, in September 2016, the FRB issued a proposed rule that would, among other things, require FHCs to hold additional capital in connection with covered physical commodity activities.

Leverage Ratios. Under the Capital Framework, we and GS Bank USA are subject to Tier 1 leverage ratios and SLRs established by the FRB. In April 2018, the FRB and the Office of the Comptroller of the Currency (OCC) issued a proposed rule which would replace the current 2% SLR buffer for G-SIBs, including us, with a buffer equal to 50% of their G-SIB buffer. This proposal and the proposal to use SA-CCR for purposes of calculating the SLR would implement certain of the revisions to the leverage ratio framework published by the Basel Committee in December 2017.

The Basel Committee has also issued consultation papers on, among other matters, changes to leverage ratio treatment of client cleared derivatives and the public disclosure of daily average balances for certain components of leverage ratio calculations.

The European Commission's November 2016 proposal to amend the CRR would implement the Basel III leverage ratio framework by establishing a 3% minimum leverage ratio requirement for certain E.U. financial institutions, including GSI and GSIB, but it has not been enacted.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Equity Capital Management and Regulatory Capital" in Part II, Item 7 of this Form 10-K and Note 20 to the consolidated financial statements in Part II, Item 8 of this Form 10-K for information about our and GS Bank USA's Tier 1 leverage ratios and SLRs, and GSI's leverage ratio.

Liquidity Ratios. The Basel Committee's framework for liquidity risk measurement, standards and monitoring requires banking organizations to measure their liquidity against two specific liquidity tests: the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR).

The LCR rule issued by the U.S. federal bank regulatory agencies and applicable to both us and GS Bank USA is generally consistent with the Basel Committee's framework and is designed to ensure that a banking organization maintains an adequate level of unencumbered, high-quality liquid assets equal to or greater than the expected net cash outflows under an acute short-term liquidity stress scenario. The LCR rule issued by the European Commission and applicable to GSI and GSIB is also generally consistent with the Basel Committee's framework. We are required to maintain a minimum LCR of 100%. We disclose, on a quarterly basis, our average daily LCR over the quarter. See "Available Information."

The NSFR is designed to promote medium- and long-term stable funding of the assets and off-balance-sheet activities of banking organizations over a one-year time horizon. The Basel Committee's NSFR framework requires banking organizations to maintain a minimum NSFR of 100%.

In May 2016, the U.S. federal bank regulatory agencies issued a proposed rule that would implement the NSFR for large U.S. banking organizations, including us and GS Bank USA. The European Commission's November 2016 proposal to amend the CRR would implement the NSFR for certain E.U. financial institutions. Neither the U.S. federal bank regulatory agencies nor the European Commission have released a final rule.

The FRB's enhanced prudential standards require BHCs, including Group Inc., with $100 billion or more in total consolidated assets, to comply with enhanced liquidity and overall risk management standards, which include maintaining a level of highly liquid assets based on projected funding needs for 30 days, and increased involvement by boards of directors in liquidity and overall risk management. Although the liquidity requirement under these rules has some similarities to the LCR, it is a separate requirement.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management — Overview and Structure of Risk Management" and "— Liquidity Risk Management" in Part II, Item 7 of this Form 10-K for information about the LCR and NSFR, as well as our risk management practices and liquidity.

Stress Tests. As required by the FRB's annual CCAR rules, we submit a capital plan for review by the FRB. In addition, we are required to perform company-run stress tests on a semi-annual basis, although the FRB has recently proposed to reduce the required frequency of these tests to annually. We publish summaries of our stress tests results on our website as described in "Available Information" below.

Our annual stress test submission is incorporated into the annual capital plans that we submit to the FRB as part of the CCAR process for large BHCs, which is designed to ensure that capital planning processes will permit continued operations by such institutions during times of economic and financial stress. As part of CCAR, the FRB evaluates an institution's plan to make capital distributions, such as by repurchasing or redeeming stock or making dividend payments, across a range of macroeconomic and firm-specific assumptions based on the institution's and the FRB's stress tests. If the FRB objects to an institution's capital plan, the institution is generally prohibited from making capital distributions other than those to which the FRB has not objected. In addition, an institution faces limitations on capital distributions to the extent that actual capital issuances are less than the amounts indicated in its capital plan.

In April 2018, the FRB issued a proposed rule to establish stress buffer requirements. Under the proposal, the SCB would replace the component of the capital conservation buffer. The SCB, subject to a minimum, would reflect stressed losses in the supervisory severely adverse scenario of the FRB's CCAR stress tests and would also include four quarters of planned common stock dividends. The proposal would also introduce a stress leverage buffer requirement, similar to the SCB, which would apply to the Tier 1 leverage ratio. In addition, the proposal would require BHCs to reduce their planned capital distributions if those distributions would not be consistent with the applicable capital buffer constraints based on the BHCs' own baseline scenario projections.

Under recent amendments to the Dodd-Frank Act, effective November 2019, depository institutions with total consolidated assets between $100 billion and $250 billion, such as GS Bank USA, will not be required to conduct annual company-run stress tests. GS Bank USA will not be required to conduct the annual company-run stress test in 2019. GSI and GSIB also have their own capital planning and stress testing process, which incorporates internally designed stress tests and those required under the PRA's Internal Capital Adequacy Assessment Process.

Dividends and Stock Repurchases. Dividend payments by Group Inc. to its shareholders and stock repurchases by Group Inc. are subject to the oversight of the FRB.

U.S. federal and state laws impose limitations on the payment of dividends by U.S. depository institutions, such as GS Bank USA. In general, the amount of dividends that may be paid by GS Bank USA is limited to the lesser of the amounts calculated under a "recent earnings" test and an "undivided profits" test. Under the recent earnings test, a dividend may not be paid if the total of all dividends declared by the entity in any calendar year is in excess of the current year's net income combined with the retained net income of the two preceding years, unless the entity obtains prior regulatory approval. Under the undivided profits test, a dividend may not be paid in excess of the entity's "undivided profits" (generally, accumulated net profits that have not been paid out as dividends or transferred to surplus).

The applicable U.S. banking regulators have authority to prohibit or limit the payment of dividends if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

Source of Strength. The Dodd-Frank Act requires BHCs to act as a source of strength to their bank subsidiaries and to commit capital and financial resources to support those subsidiaries. This support may be required by the FRB at times when we might otherwise determine not to provide it. Capital loans by a BHC to a subsidiary bank are subordinate in right of payment to deposits and to certain other indebtedness of the subsidiary bank. In addition, if a BHC commits to a U.S. federal banking agency that it will maintain the capital of its bank subsidiary, whether in response to the FRB's invoking its source-of-strength authority or in response to other regulatory measures, that commitment will be assumed by the bankruptcy trustee for the BHC and the bank will be entitled to priority payment in respect of that commitment, ahead of other creditors of the BHC.

Transactions between Affiliates. Transactions between GS Bank USA or its subsidiaries, on the one hand, and Group Inc. or its other subsidiaries and affiliates, on the other hand, are regulated by the FRB. These regulations generally limit the types and amounts of transactions (including credit extensions from GS Bank USA or its subsidiaries to Group Inc. or its other subsidiaries and affiliates) that may take place and generally require those transactions to be on market terms or better to GS Bank USA or its subsidiaries. These regulations generally do not apply to transactions between GS Bank USA and its subsidiaries. The Dodd-Frank Act expanded the coverage and scope of these regulations, including by applying them to the credit exposure arising under derivative transactions, repurchase and reverse repurchase agreements, and securities borrowing and lending transactions.

The BHC Act prohibits the FRB from requiring a payment by a BHC subsidiary to a depository institution if the functional regulator of that subsidiary objects to such payment. In such a case, the FRB could instead require the divestiture of the depository institution and impose operating restrictions pending the divestiture.

Resolution and Recovery. Group Inc. is required by the FRB and the FDIC to submit a periodic plan for its rapid and orderly resolution in the event of material financial distress or failure (resolution plan). If the regulators jointly determine that an institution has failed to remediate identified shortcomings in its resolution plan and that its resolution plan, after any permitted resubmission, is not credible or would not facilitate an orderly resolution under the U.S. Bankruptcy Code, the regulators may jointly impose more stringent capital, leverage or liquidity requirements or restrictions on growth, activities or operations or may jointly order the institutions to divest assets or operations in order to facilitate orderly resolution in the event of failure. In December 2018, the FRB and FDIC finalized guidance for resolution plan submissions which consolidated or superseded all prior guidance. See "Risk Factors — The application of Group Inc.'s proposed resolution strategy could result in greater losses for Group Inc.'s security holders" in Part I, Item 1A of this Form 10-K and "Management's Discussion and Analysis of Financial Condition and Results of Operations — Regulatory Matters and Other Developments — Regulatory Matters — Resolution and Recovery Plans" in Part II, Item 7 of this Form 10-K for further information about our resolution plan.

We are also required by the FRB to submit, on a periodic basis, a global recovery plan that outlines the steps that management could take to reduce risk, maintain sufficient liquidity, and conserve capital in times of prolonged stress.

The FDIC has issued a rule requiring each insured depository institution with $50 billion or more in assets, such as GS Bank USA, to provide a resolution plan. Our resolution plan for GS Bank USA must, among other things, demonstrate that it is adequately protected from risks arising from our other entities.

The federal bank regulatory agencies have adopted final rules imposing restrictions on qualified financial contracts (QFCs) entered into by G-SIBs. The rules began to phase in on January 1, 2019 and will be fully effective on January 1, 2020. The rules are intended to facilitate the orderly resolution of a failed G-SIB by limiting the ability of the G-SIB to enter into a QFC unless (i) the counterparty waives certain default rights in such contract arising upon the entry of the G-SIB or one of its affiliates into resolution, (ii) the contract does not contain enumerated prohibitions on the transfer of such contract and/or any related credit enhancement, and (iii) the counterparty agrees that the contract will be subject to the special resolution regimes set forth in the Dodd-Frank Act orderly liquidation authority (OLA) and the Federal Deposit Insurance Act of 1950 (FDIA), described below. Compliance can be achieved by adhering to the ISDA Universal Protocol or U.S. ISDA Protocol described below.

Certain Group Inc. subsidiaries, along with those of a number of other major global banking organizations, adhere to the International Swaps and Derivatives Association Universal Resolution Stay Protocol (ISDA Universal Protocol), which was developed and updated in coordination with the Financial Stability Board (FSB), an international body that sets standards and coordinates the work of national financial authorities and international standard-setting bodies. The ISDA Universal Protocol imposes a stay on certain cross-default and early termination rights within standard ISDA derivative contracts and securities financing transactions between adhering parties in the event that one of them is subject to resolution in its home jurisdiction, including a resolution under the OLA or the FDIA in the U.S. In addition, certain Group Inc. subsidiaries adhere to the International Swaps and Derivatives Association 2018 U.S. Resolution Stay Protocol (U.S. ISDA Protocol), which was based on the ISDA Universal Protocol and was created to allow market participants to comply with the final QFC rules adopted by the federal bank regulatory agencies.

The E.U. Bank Recovery and Resolution Directive (BRRD) establishes a framework for the recovery and resolution of financial institutions in the E.U., such as GSI and GSIB. The BRRD provides national supervisory authorities with tools and powers to pre-emptively address potential financial crises in order to promote financial stability and minimize taxpayers' exposure to losses. The BRRD requires E.U. member states to grant "bail-in" powers to E.U. resolution authorities to recapitalize a failing entity by writing down its unsecured debt or converting its unsecured debt into equity. Financial institutions in the E.U. must provide that contracts enable such actions.

Total Loss-Absorbing Capacity. In December 2016, the FRB adopted a final rule establishing loss-absorbency and related requirements for BHCs that have been designated as U.S. G-SIBs, such as Group Inc. The rule became effective in January 2019 with no phase-in period. The rule addresses U.S. implementation of the FSB's total loss-absorbing capacity (TLAC) principles and term sheet on minimum TLAC requirements for G-SIBs (issued in November 2015). The rule (i) establishes minimum TLAC requirements, (ii) establishes minimum "eligible long-term debt" (i.e., debt that is unsecured, has a maturity of at least one year from issuance and satisfies certain additional criteria) requirements, (iii) prohibits certain parent company transactions and (iv) caps the amount of parent company liabilities that are not eligible long-term debt.

The rule also prohibits a BHC that has been designated as a U.S. G-SIB from (i) guaranteeing liabilities of subsidiaries that are subject to early termination provisions if the BHC enters into an insolvency or receivership proceeding, subject to an exception for guarantees permitted by rules of the U.S. federal banking agencies imposing restrictions on QFCs; (ii) incurring liabilities guaranteed by subsidiaries; (iii) issuing short-term debt; or (iv) entering into derivatives and certain other financial contracts with external counterparties.

Additionally, the rule caps, at 5% of the value of the parent company's eligible TLAC, the amount of unsecured non-contingent third-party liabilities that are not eligible long-term debt that could rank equally with or junior to eligible long-term debt.

The FSB's final TLAC standard requires certain material subsidiaries of a G-SIB organized outside of the G-SIB's home country, such as GSI and GSIB, to maintain amounts of TLAC directly or indirectly from the parent company. In July 2017, the FSB issued a final set of guiding principles on the implementation of the TLAC requirements applicable to material subsidiaries.

The BRRD subjects institutions to a minimum requirement for own funds and eligible liabilities (MREL), which is generally consistent with the FSB's TLAC standard. In June 2018, the Bank of England published a statement of policy on internal MREL, which requires a material U.K. subsidiary of an overseas banking group, such as GSI, to meet a minimum internal MREL requirement to facilitate the transfer of losses to its resolution entity, which for GSI is Group Inc. The transitional minimum internal MREL requirement began to phase in from January 1, 2019 and will become fully effective on January 1, 2022. In order to comply with the MREL statement of policy, bail-in triggers have been provided to the Bank of England over certain intercompany regulatory capital and senior debt instruments issued by GSI. These triggers enable the Bank of England to write down such instruments or convert such instruments to equity. The triggers can be exercised by the Bank of England if it determines that GSI has reached the point of non-viability and the FRB and the FDIC have not objected to the bail-in or if Group Inc. enters bankruptcy or similar proceedings.

The European Commission's November 2016 proposed amendments to the CRR and the BRRD include provisions that are designed to implement the FSB's minimum TLAC requirement for G-SIBs. The proposal would require subsidiaries of a non-E.U. G-SIB that account for more than 5% of its RWAs, operating income or leverage exposure, such as GSI, to meet 90% of the requirement applicable to E.U. G-SIBs.

In November 2016, the European Commission also proposed to amend CRD IV to require a non-E.U. G-SIB, such as us, to establish an E.U. intermediate holding company (E.U. IHC) if a firm has two or more of certain types of E.U. financial institution subsidiaries, including broker-dealers and banks. The European Commission also proposed amendments to the CRR that would require E.U. IHCs to satisfy MREL requirements and certain other prudential requirements. These proposals are subject to adoption at the E.U. level and, for the directives, implementing rulemakings by E.U. member states, which have not yet occurred.

Insolvency of an Insured Depository Institution or a Bank Holding Company. Under the FDIA, if the FDIC is appointed as conservator or receiver for an insured depository institution such as GS Bank USA, upon its insolvency or in certain other events, the FDIC has broad powers, including the power:

- To transfer any of the depository institution's assets and liabilities to a new obligor, including a newly formed "bridge" bank, without the approval of the depository institution's creditors;
- To enforce the depository institution's contracts pursuant to their terms without regard to any provisions triggered by the appointment of the FDIC in that capacity; or
- To repudiate or disaffirm any contract or lease to which the depository institution is a party, the performance of which is determined by the FDIC to be burdensome and the disaffirmance or repudiation of which is determined by the FDIC to promote the orderly administration of the depository institution.

In addition, the claims of holders of domestic deposit liabilities and certain claims for administrative expenses against an insured depository institution would be afforded a priority over other general unsecured claims, including deposits at non-U.S. branches and claims of debtholders of the institution, in the "liquidation or other resolution" of such an institution by any receiver. As a result, whether or not the FDIC ever sought to repudiate any debt obligations of GS Bank USA, the debtholders (other than depositors) would be treated differently from, and could receive, if anything, substantially less than, the depositors of GS Bank USA.

The Dodd-Frank Act created a new resolution regime (known as OLA) for BHCs and their affiliates that are systemically important and certain non-bank financial companies. Under OLA, the FDIC may be appointed as receiver for the systemically important institution and its failed non-bank subsidiaries if, upon the recommendation of applicable regulators, the U.S. Secretary of the Treasury determines, among other things, that the institution is in default or in danger of default, that the institution's failure would have serious adverse effects on the U.S. financial system and that resolution under OLA would avoid or mitigate those effects.

If the FDIC is appointed as receiver under OLA, then the powers of the receiver, and the rights and obligations of creditors and other parties who have dealt with the institution, would be determined under OLA, and not under the bankruptcy or insolvency law that would otherwise apply. The powers of the receiver under OLA were generally based on the powers of the FDIC as receiver for depository institutions under the FDIA.

Substantial differences in the rights of creditors exist between OLA and the U.S. Bankruptcy Code, including the right of the FDIC under OLA to disregard the strict priority of creditor claims in some circumstances, the use of an administrative claims procedure to determine creditors' claims (as opposed to the judicial procedure utilized in bankruptcy proceedings), and the right of the FDIC to transfer claims to a "bridge" entity. In addition, OLA limits the ability of creditors to enforce certain contractual cross-defaults against affiliates of the institution in receivership. The FDIC has issued a notice that it would likely resolve a failed FHC by transferring its assets to a "bridge" holding company under its "single point of entry" or "SPOE" strategy pursuant to OLA.

Deposit Insurance. Deposits at GS Bank USA have the benefit of FDIC insurance up to the applicable limits. The FDIC's Deposit Insurance Fund is funded by assessments on insured depository institutions. GS Bank USA's assessment (subject to adjustment by the FDIC) is currently based on its average total consolidated assets less its average tangible equity during the assessment period, its supervisory ratings and specified forward-looking financial measures used to calculate the assessment rate. In addition, deposits at GSIB are covered by the Financial Services Compensation Scheme up to the applicable limits.

Prompt Corrective Action. The U.S. Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) requires the U.S. federal bank regulatory agencies to take "prompt corrective action" in respect of depository institutions that do not meet specified capital requirements. FDICIA establishes five capital categories for FDIC-insured banks, such as GS Bank USA: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized.

An institution may be downgraded to, or deemed to be in, a capital category that is lower than is indicated by its capital ratios if it is determined to be in an unsafe or unsound condition or if it receives an unsatisfactory examination rating with respect to certain matters. FDICIA imposes progressively more restrictive constraints on operations, management and capital distributions, as the capital category of an institution declines. Failure to meet the capital requirements could also require a depository institution to raise capital. Ultimately, critically undercapitalized institutions are subject to the appointment of a receiver or conservator, as described in "Insolvency of an Insured Depository Institution or a Bank Holding Company" above.

The prompt corrective action regulations do not apply to BHCs. However, the FRB is authorized to take appropriate action at the BHC level, based upon the undercapitalized status of the BHC's depository institution subsidiaries. In certain instances relating to an undercapitalized depository institution subsidiary, the BHC would be required to guarantee the performance of the undercapitalized subsidiary's capital restoration plan and might be liable for civil money damages for failure to fulfill its commitments on that guarantee. Furthermore, in the event of the bankruptcy of the BHC, the guarantee would take priority over the BHC's general unsecured creditors, as described in "Source of Strength" above.

Volcker Rule and Other Restrictions on Activities. As a BHC, we are subject to limitations on the types of business activities we may engage in.

Volcker Rule. The provisions of the Dodd-Frank Act referred to as the "Volcker Rule" became effective in July 2015. The Volcker Rule prohibits "proprietary trading," but permits activities such as underwriting, market making and risk-mitigation hedging, requires an extensive compliance program and includes additional reporting and record-keeping requirements.

In addition, the Volcker Rule limits the sponsorship of, and investment in, "covered funds" (as defined in the rule) by banking entities, including us. It also limits certain types of transactions between us and our sponsored funds, similar to the limitations on transactions between depository institutions and their affiliates. Covered funds include our private equity funds, certain of our credit and real estate funds, our hedge funds and certain other investment structures. The limitation on investments in covered funds requires us to limit our investment in each such fund to 3% or less of the fund's net asset value, and to limit our aggregate investment in all such funds to 3% or less of our Tier 1 capital.

The FRB has extended the conformance period to July 2022 for our investments in, and relationships with, certain legacy "illiquid funds" (as defined in the Volcker Rule) that were in place prior to December 2013. See Note 6 to the consolidated financial statements in Part II, Item 8 of this Form 10-K for further information about our investments in such funds.

In July 2018, the FRB, OCC, FDIC, CFTC and SEC issued a notice of proposed rulemaking intended to amend the application of the Volcker Rule based on the size and scope of a banking entity's trading activities and to clarify and amend certain definitions, requirements and exemptions. The ultimate impact of any amendments to the Volcker Rule will depend on, among other things, further rulemaking and implementation guidance from the relevant U.S. federal regulatory agencies and the development of market practices and standards.

Other Restrictions. FHCs generally can engage in a broader range of financial and related activities than are otherwise permissible for BHCs as long as they continue to meet the eligibility requirements for FHCs. The broader range of permissible activities for FHCs includes underwriting, dealing and making markets in securities and making investments in non-FHCs (merchant banking activities). In addition, certain FHCs are permitted to engage in certain commodities activities in the U.S. that may otherwise be impermissible for BHCs, so long as the assets held pursuant to these activities do not equal 5% or more of their consolidated assets.

The FRB, however, has the authority to limit an FHC's ability to conduct activities that would otherwise be permissible, and will likely do so if the FHC does not satisfactorily meet certain requirements of the FRB. For example, if an FHC or any of its U.S. depository institution subsidiaries ceases to maintain its status as well-capitalized or well-managed, the FRB may impose corrective capital and/or managerial requirements, as well as additional limitations or conditions. If the deficiencies persist, the FHC may be required to divest its U.S. depository institution subsidiaries or to cease engaging in activities other than the business of banking and certain closely related activities.

If any insured depository institution subsidiary of an FHC fails to maintain at least a "satisfactory" rating under the Community Reinvestment Act, the FHC would be subject to restrictions on certain new activities and acquisitions.

In addition, we are required to obtain prior FRB approval before engaging in certain banking and other financial activities both within and outside the U.S.

In September 2016, the FRB issued a proposed rule which, if adopted, would impose new requirements on the physical commodity activities and certain merchant banking activities of FHCs. The proposed rule would, among other things, (i) require FHCs to hold additional capital in connection with covered physical commodity activities, including merchant banking investments in companies engaged in physical commodity activities; (ii) tighten the quantitative limits on permissible physical trading activity; and (iii) establish new public reporting requirements on the nature and extent of an FHC's physical commodity holdings and activities. In addition, in a September 2016 report, the FRB recommended that Congress repeal (i) the authority of FHCs to engage in merchant banking activities; and (ii) the authority described above for certain FHCs to engage in certain otherwise permissible commodities activities.

In June 2018, the FRB issued a final rule regarding single counterparty credit limits, which imposes more stringent requirements for credit exposures among major financial institutions. The final rule requires U.S. G-SIBs, such as us, to comply by January 1, 2020. In addition, the FRB has proposed early remediation requirements, which are modeled on the prompt corrective action regime, described in "Prompt Corrective Action" above, but are designed to require action to begin in earlier stages of a company's financial distress, based on a range of triggers, including capital and leverage, stress test results, liquidity and risk management.

In addition, New York State banking law imposes lending limits (which take into account credit exposure from derivative transactions) and other requirements that could impact the manner and scope of GS Bank USA's activities.

The U.S. federal bank regulatory agencies have issued guidance that focuses on transaction structures and risk management frameworks and that outlines high-level principles for safe-and-sound leveraged lending, including underwriting standards, valuation and stress testing. This guidance has, among other things, limited the percentage amount of debt that can be included in certain transactions. The status of this guidance is uncertain as the U.S. Government Accountability Office has determined that it is a rule subject to review under the Congressional Review Act.

Broker-Dealer and Securities Regulation

Our broker-dealer subsidiaries are subject to regulations that cover all aspects of the securities business, including sales methods, trade practices, use and safekeeping of clients' funds and securities, capital structure, record-keeping, the financing of clients' purchases, and the conduct of directors, officers and employees. In the U.S., the SEC is the federal agency responsible for the administration of the federal securities laws. GS&Co. is registered as a broker-dealer, a municipal advisor and an investment adviser with the SEC and as a broker-dealer in all 50 states and the District of Columbia. U.S. self-regulatory organizations, such as FINRA and the NYSE, adopt rules that apply to, and examine, broker-dealers such as GS&Co.

U.S. state securities and other U.S. regulators also have regulatory or oversight authority over GS&Co. Similarly, our businesses are also subject to regulation by various non-U.S. governmental and regulatory bodies and self-regulatory authorities in virtually all countries where we have offices, as described further below, as well as in "Other Regulation." For a description of net capital requirements applicable to GS&Co., see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Equity Capital Management and Regulatory Capital — U.S. Regulated Broker-Dealer Subsidiaries" in Part II, Item 7 of this Form 10-K.

In Europe, we provide broker-dealer services that are subject to oversight by national regulators. These services are regulated in accordance with national laws, many of which implement E.U. directives, and, increasingly, by directly applicable E.U. regulations. These national and E.U. laws require, among other things, compliance with certain capital adequacy standards, customer protection requirements and market conduct and trade reporting rules.

Goldman Sachs Japan Co., Ltd. (GSJCL), our regulated Japanese broker-dealer, is subject to capital requirements imposed by Japan's Financial Services Agency. GSJCL is also regulated by the Tokyo Stock Exchange, the Osaka Exchange, the Tokyo Financial Exchange, the Japan Securities Dealers Association, the Tokyo Commodity Exchange, Securities and Exchange Surveillance Commission, Bank of Japan and the Ministry of Finance, among others.

Also, the Securities and Futures Commission in Hong Kong, the Monetary Authority of Singapore, the China Securities Regulatory Commission, the Korean Financial Supervisory Service, the Reserve Bank of India, the Securities and Exchange Board of India, the Australian Securities and Investments Commission and the Australian Securities Exchange, among others, regulate various of our subsidiaries and also have capital standards and other requirements comparable to the rules of the SEC.

Our exchange-based market-making activities are subject to extensive regulation by a number of securities exchanges. As a market maker on exchanges, we are required to maintain orderly markets in the securities to which we are assigned.

In April 2018, the SEC issued a proposed rule that would require broker-dealers to act in the best interest of their customers, and also proposed an interpretation clarifying the SEC's views of the existing fiduciary duty owed by investment advisers to their clients. Additionally, the SEC issued a proposed rule that would require broker-dealers and investment advisers to provide a standardized, short-form disclosure highlighting services offered, applicable standards of conduct, fees and costs, the differences between brokerage and advisory services, and any conflicts of interest.

In November 2018, the SEC adopted a final rule requiring broker-dealers to provide to specified customers at their request individualized information about the execution of certain stock orders, including how such orders were routed and the average rebates received or fees paid.

GS&Co., GS Bank USA and other U.S. subsidiaries are also subject to rules adopted by U.S. federal agencies pursuant to the Dodd-Frank Act that require any person who organizes or initiates certain asset-backed securities transactions to retain a portion (generally, at least five percent) of any credit risk that the person conveys to a third party. For certain securitization transactions, retention by third-party purchasers may satisfy this requirement.

Securitizations would also be affected by rules proposed by the SEC to implement the Dodd-Frank Act's prohibition against securitization participants engaging in any transaction that would involve or result in any material conflict of interest with an investor in a securitization transaction. The proposed rules would exempt bona fide market-making activities and risk-mitigating hedging activities in connection with securitization activities from the general prohibition.

The SEC, FINRA and regulators in various non-U.S. jurisdictions have imposed both conduct-based and disclosure-based requirements with respect to research reports and research analysts and may impose additional regulations.

Swaps, Derivatives and Commodities Regulation

The commodity futures, commodity options and swaps industry in the U.S. is subject to regulation under the U.S. Commodity Exchange Act (CEA). The CFTC is the U.S. federal agency charged with the administration of the CEA. In addition, the SEC is the U.S. federal agency charged with the regulation of security-based swaps. The rules and regulations of various self-regulatory organizations, such as the Chicago Mercantile Exchange, other futures exchanges and the National Futures Association, also govern commodity futures, commodity options and swaps activities.

The terms "swaps" and "security-based swaps" include a wide variety of derivative instruments in addition to those conventionally referred to as swaps (including certain forward contracts and options), and relate to a wide variety of underlying assets or obligations, including currencies, commodities, interest or other monetary rates, yields, indices, securities, credit events, loans and other financial obligations.

CFTC rules require registration of swap dealers, mandatory clearing and execution of interest rate and credit default swaps and real-time public reporting and adherence to business conduct standards for all in-scope swaps. In December 2016, the CFTC proposed revised capital regulations for swap dealers that are not subject to the capital rules of a prudential regulator, such as the FRB, as well as a liquidity requirement for those swap dealers.

SEC rules govern the registration and regulation of security-based swap dealers but compliance with such rules is not currently required. In October 2018, the SEC re-proposed, and requested comment on, a number of its rules for security-based swap dealers, including capital, margin and segregation requirements.

GS&Co. is registered with the CFTC as a futures commission merchant, and several of our subsidiaries, including GS&Co., are registered with the CFTC and act as commodity pool operators and commodity trading advisors. GS&Co. and other subsidiaries, including GS Bank USA, GSI and J. Aron & Company LLC (J. Aron), are registered with the CFTC as swap dealers. In addition, GS&Co. and Goldman Sachs Financial Markets, L.P. are registered with the SEC as OTC derivatives dealers.

Our affiliates registered as swap dealers are subject to the margin rules issued by the CFTC (in the case of our non-bank swap dealers) and the FRB (in the case of GS Bank USA). The rules for variation margin have become effective, and those for initial margin will phase in through September 2020 depending on certain activity levels of the swap dealer and the relevant counterparty. In contrast to the FRB margin rules, inter-affiliate transactions under the CFTC margin rules are generally exempt from initial margin requirements.

The CFTC has proposed position limit rules that will limit the size of positions in physical commodity derivatives that can be held by any entity, or any group of affiliates or other parties trading under common control, subject to certain exemptions, such as for bona fide hedging positions. These proposed rules would apply to positions in swaps, as well as futures and options on futures.

Similar types of swap regulation have been proposed or adopted in jurisdictions outside the U.S., including in the E.U. and Japan. For example, the E.U. has established regulatory requirements relating to portfolio reconciliation and reporting, clearing certain OTC derivatives and margining for uncleared derivatives activities under the European Market Infrastructure Regulation.

The CFTC has adopted rules relating to cross-border regulation of swaps, and has proposed cross-border business conduct and registration rules. The CFTC has entered into agreements with certain non-U.S. regulators, including in the E.U., regarding the cross-border regulation of derivatives and the mutual recognition of cross-border clearing houses, and has approved substituted compliance with certain non-U.S. regulations, including E.U. regulations, related to certain business conduct requirements and margin rules. The U.S. prudential regulators have not yet made a determination with respect to substituted compliance for transactions subject to non-U.S. margin rules.

J. Aron is authorized by the U.S. Federal Energy Regulatory Commission (FERC) to sell wholesale physical power at market-based rates. As a FERC-authorized power marketer, J. Aron is subject to regulation under the U.S. Federal Power Act and FERC regulations and to the oversight of FERC. As a result of our investing activities, Group Inc. is also an "exempt holding company" under the U.S. Public Utility Holding Company Act of 2005 and applicable FERC rules.

In addition, as a result of our power-related and commodities activities, we are subject to energy, environmental and other governmental laws and regulations, as described in "Risk Factors — Our commodities activities, particularly our physical commodities activities, subject us to extensive regulation and involve certain potential risks, including environmental, reputational and other risks that may expose us to significant liabilities and costs" in Part I, Item 1A of this Form 10-K.

Investment Management Regulation

Our investment management business is subject to significant regulation in numerous jurisdictions around the world relating to, among other things, the safeguarding of client assets, offerings of funds, marketing activities, transactions among affiliates and our management of client funds.

The SEC has adopted rules relating to liquidity risk management that require registered open-end funds to classify and review the liquidity of their portfolio assets. In addition, the rules require funds to make disclosures relating to their liquidity risk management program and report to the SEC instances when a fund's percentage of illiquid investments exceeds certain thresholds or when certain funds experience shortfalls in their highly liquid investments. While some rules became effective in December 2018, certain portfolio asset classification and disclosure requirements will become effective in June 2019 and December 2019.

Certain of our European subsidiaries, including GSAMI, are subject to the Alternative Investment Fund Managers Directive and related regulations, which govern the approval, organizational, marketing and reporting requirements of E.U.-based alternative investment managers and the ability of alternative investment fund managers located outside the E.U. to access the E.U. market.

An E.U. regulation relating to money market funds, including provisions prescribing minimum levels of daily and weekly liquidity, clear labeling of money market funds and internal credit risk assessments, became effective in July 2018.

Compensation Practices

Our compensation practices are subject to oversight by the FRB and, with respect to some of our subsidiaries and employees, by other regulatory bodies worldwide. The scope and content of compensation regulation in the financial industry are continuing to develop, and we expect that these regulations and resulting market practices will evolve over a number of years.

The FSB has released standards for local regulators to implement certain compensation principles for banks and other financial companies designed to encourage sound compensation practices. The U.S. federal bank regulatory agencies have provided guidance designed to ensure that incentive compensation arrangements at banking organizations take into account risk and are consistent with safe and sound practices. The guidance sets forth the following three key principles with respect to incentive compensation arrangements: (i) the arrangements should provide employees with incentives that appropriately balance risk and financial results in a manner that does not encourage employees to expose their organizations to imprudent risk; (ii) the arrangements should be compatible with effective controls and risk management; and (iii) the arrangements should be supported by strong corporate governance. The guidance provides that supervisory findings with respect to incentive compensation will be incorporated, as appropriate, into the organization's supervisory ratings, which can affect its ability to make acquisitions or perform other actions. The guidance also provides that enforcement actions may be taken against a banking organization if its incentive compensation arrangements or related risk management, control or governance processes pose a risk to the organization's safety and soundness.

The Dodd-Frank Act requires the U.S. financial regulators, including the FRB and SEC, to adopt rules on incentive-based payment arrangements at specified regulated entities having at least $1 billion in total assets (including Group Inc. and some of its depository institution, broker-dealer and investment adviser subsidiaries). The U.S. financial regulators proposed revised rules in 2016, which have not been finalized.

In October 2016, the NYDFS issued guidance emphasizing that its regulated banking institutions, including GS Bank USA, must ensure that any incentive compensation arrangements tied to employee performance indicators are subject to effective risk management, oversight and control.

In the E.U., the CRR and CRD IV include compensation provisions designed to implement the FSB's compensation standards. These rules have been implemented by E.U. member states and, among other things, limit the ratio of variable to fixed compensation of certain employees, including those identified as having a material impact on the risk profile of E.U.-regulated entities, including GSI.

The E.U. has also introduced rules regulating compensation for certain persons providing services to certain investment funds. These requirements are in addition to the guidance issued by U.S. financial regulators described above and the Dodd-Frank Act provision described above.

Anti-Money Laundering and Anti-Bribery Rules and Regulations

The U.S. Bank Secrecy Act (BSA), as amended by the USA PATRIOT Act of 2001 (PATRIOT Act), contains anti-money laundering and financial transparency laws and mandates the implementation of various regulations applicable to all financial institutions, including standards for verifying client identification at account opening, and obligations to monitor client transactions and report suspicious activities. Through these and other provisions, the BSA and the PATRIOT Act seek to promote the identification of parties that may be involved in terrorism, money laundering or other suspicious activities. Anti-money laundering laws outside the U.S. contain some similar provisions.

In addition, we are subject to laws and regulations worldwide, including the U.S. Foreign Corrupt Practices Act (FCPA) and the U.K. Bribery Act, relating to corrupt and illegal payments to, and hiring practices with regard to, government officials and others. The scope of the types of payments or other benefits covered by these laws is very broad and regulators are frequently using enforcement proceedings to define the scope of these laws. The obligation of financial institutions, including Goldman Sachs, to identify their clients, to monitor for and report suspicious transactions, to monitor direct and indirect payments to government officials, to respond to requests for information by regulatory authorities and law enforcement agencies, and to share information with other financial institutions, has required the implementation and maintenance of internal practices, procedures and controls.

Privacy and Cyber Security Regulation

Certain of our businesses are subject to laws and regulations enacted by U.S. federal and state governments, the E.U. or other non-U.S. jurisdictions and/or enacted by various regulatory organizations or exchanges relating to the privacy of the information of clients, employees or others, including the GLB Act, the E.U.'s General Data Protection Regulation (GDPR) which took effect on May 25, 2018, the Japanese Personal Information Protection Act, the Hong Kong Personal Data (Privacy) Ordinance, the Australian Privacy Act and the Brazilian Bank Secrecy Law. The GDPR has heightened our privacy compliance obligations, impacted our businesses' collection, processing and retention of personal data and imposed strict standards for reporting data breaches. The GDPR also provides for significant penalties for non-compliance. In addition, the California Consumer Privacy Act (CCPA) was enacted in June 2018 and is scheduled to take effect on January 1, 2020 and will impose privacy compliance obligations with regard to the personal information of California residents.

The NYDFS also requires financial institutions regulated by the NYDFS, including GS Bank USA, to, among other things, (i) establish and maintain a cyber security program designed to ensure the confidentiality, integrity and availability of their information systems; (ii) implement and maintain a written cyber security policy setting forth policies and procedures for the protection of their information systems and nonpublic information; and (iii) designate a Chief Information Security Officer. In addition, in October 2016, the U.S. federal bank regulatory agencies issued an advance notice of proposed rulemaking on potential enhanced cyber risk management standards for large financial institutions.

Other Regulation

U.S. and non-U.S. government agencies, regulatory bodies and self-regulatory organizations, as well as state securities commissions and other state regulators in the U.S., are empowered to conduct administrative proceedings that can result in censure, fine, the issuance of cease-and-desist orders, or the suspension or expulsion of a regulated entity or its directors, officers or employees. In particular, state attorneys general have become much more active in seeking fines and penalties in enforcement led by the federal regulators. In addition, a number of our other activities require us to obtain licenses, adhere to applicable regulations and be subject to the oversight of various regulators in the jurisdictions in which we conduct these activities.

MiFID II includes extensive market structure reforms, such as the establishment of new trading venue categories for the purposes of discharging the obligation to trade OTC derivatives on a trading platform and enhanced pre- and post-trade transparency covering a wider range of financial instruments. In equities, MiFID II introduced volume caps on non-transparent liquidity trading for trading venues, limited the use of broker-dealer crossing networks and created a new regime for systematic internalizers, which are investment firms that execute client transactions outside a trading venue.

Additional control requirements were introduced for algorithmic trading, high frequency trading and direct electronic access. Commodities trading firms are required to calculate their positions and adhere to specific limits. Other reforms introduced enhanced transaction reporting, the publication of best execution data by investment firms and trading venues, transparency on costs and charges of service to investors, changes to the way investment managers can pay for the receipt of investment research and mandatory unbundling for broker-dealers between execution and other major services.

The E.U. and national financial legislators and regulators in the E.U. have proposed or adopted numerous further market reforms that may impact our businesses, including heightened corporate governance standards for financial institutions, rules on key information documents for packaged retail and insurance-based investment products and rules on indices that are used as benchmarks for financial instruments or funds. In addition, the European Commission, the European Securities and Markets Authority and the European Banking Authority have announced or are formulating regulatory standards and other measures which will impact our European operations. Certain of our European subsidiaries are also regulated by the securities, derivatives and commodities exchanges of which they are members.

As described above, many of our subsidiaries are subject to regulatory capital requirements in jurisdictions throughout the world. Subsidiaries not subject to separate regulation may hold capital to satisfy local tax guidelines, rating agency requirements or internal policies, including policies concerning the minimum amount of capital a subsidiary should hold based upon its underlying risk.

Executive Officers of The Goldman Sachs Group, Inc.

Set forth below are the name, age, present title, principal occupation and certain biographical information for our executive officers. Our executive officers have been appointed by and serve at the pleasure of our Board of Directors.

Dane E. Holmes, 48
Mr. Holmes has been an Executive Vice President and Global Head of Human Capital Management since January 2018 and Global Head of Pine Street, our leadership development program, since 2016. He had previously served as Global Head of Investor Relations since October 2007.

John F.W. Rogers, 62
Mr. Rogers has been an Executive Vice President since April 2011 and Chief of Staff and Secretary to our Board of Directors since December 2001.

Stephen M. Scherr, 54
Mr. Scherr has been an Executive Vice President and Chief Financial Officer since November 2018. He had previously served as Chief Executive Officer of Goldman Sachs Bank USA since May 2016, and head of the Consumer & Commercial Banking Division from 2016 to 2018. From June 2014 to 2017, he was Chief Strategy Officer, and from 2011 to 2016 he was Head of the Latin America business. He was also Global Head of the Financing Group from 2008 to 2014.

Karen P. Seymour, 57
Ms. Seymour has been an Executive Vice President, General Counsel and Secretary, and Head or Co-Head of the Legal Department since January 2018. From 2000 through January 2002 and 2005 through 2017, she was a partner at Sullivan & Cromwell LLP, a global law firm, including serving as a member of its management committee from April 2015 to December 2017, and as the co-managing partner of its litigation group from December 2012 to April 2015.

Sarah E. Smith, 59
Ms. Smith has been an Executive Vice President and Global Head of Compliance since March 2017. She had previously served as Controller and Chief Accounting Officer since 2002.

David M. Solomon, 57
Mr. Solomon has been Chairman of the Board since January 2019, and Chief Executive Officer and a director since October 2018. He had previously served as President and Chief or Co-Chief Operating Officer since January 2017 and Co-Head of the Investment Banking Division from July 2006 to December 2016.

John E. Waldron, 49
Mr. Waldron has been President and Chief Operating Officer since October 2018. He had previously served as Co-Head of the Investment Banking Division since December 2014. Prior to that he was Global Head of Investment Banking Services/Client Coverage for the Investment Banking Division and had oversight of the Investment Banking Services Leadership Group, and from 2007 to 2009 was Global Co-Head of the Financial Sponsors Group.

Available Information

Our internet address is www.goldmansachs.com and the investor relations section of our website is located at www.goldmansachs.com/investor-relations. We make available free of charge through the investor relations section of our website, annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934 (Exchange Act), as well as proxy statements, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

Also posted on our website, and available in print upon request of any shareholder to our Investor Relations Department, are our certificate of incorporation and by-laws, charters for our Audit Committee, Risk Committee, Compensation Committee, Corporate Governance and Nominating Committee, and Public Responsibilities Committee, our Policy Regarding Director Independence Determinations, our Policy on Reporting of Concerns Regarding Accounting and Other Matters, our Corporate Governance Guidelines and our Code of Business Conduct and Ethics governing our directors, officers and employees. Within the time period required by the SEC, we will post on our website any amendment to the Code of Business Conduct and Ethics and any waiver applicable to any executive officer, director or senior financial officer.

In addition, our website includes information concerning:

- Purchases and sales of our equity securities by our executive officers and directors;
- Disclosure relating to certain non-GAAP financial measures (as defined in the SEC's Regulation G) that we may make public orally, telephonically, by webcast, by broadcast or by other means from time to time;
- Dodd-Frank Act stress test results;
- The public portion of our resolution plan submission;
- Our risk management practices and regulatory capital ratios, as required under the disclosure-related provisions of the Capital Framework, which are based on the third pillar of Basel III; and
- Our quarterly average LCR.

Our Investor Relations Department can be contacted at The Goldman Sachs Group, Inc., 200 West Street, 29th Floor, New York, New York 10282, Attn: Investor Relations, telephone: 212-902-0300, e-mail: gs-investor-relations@gs.com.

From time to time, we use our website, our Twitter account (twitter.com/GoldmanSachs), our Instagram account (instagram.com/GoldmanSachs) and other social media channels as additional means of disclosing public information to investors, the media and others interested in Goldman Sachs. In addition, our officers may use similar social media channels to disclose public information. It is possible that certain information we or our officers post on our website and on social media could be deemed to be material information, and we encourage investors, the media and others interested in Goldman Sachs to review the business and financial information we or our officers post on our website and on the social media channels identified above. The information on our website and those social media channels is not incorporated by reference into this Form 10-K.

Cautionary Statement Pursuant to the U.S. Private Securities Litigation Reform Act of 1995

We have included or incorporated by reference in this Form 10-K, and from time to time our management may make, statements that may constitute "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are not historical facts, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside our control.

These statements include statements other than historical information or statements of current conditions and may relate to our future plans and objectives and results, among other things, and may also include statements about the effect of changes to the capital, leverage, liquidity, long-term debt and TLAC rules applicable to banks and BHCs, the impact of the Dodd-Frank Act on our businesses and operations, and various legal proceedings, governmental investigations or mortgage-related contingencies as set forth in both Notes 27 and 18 to the consolidated financial statements in Part II, Item 8 of this Form 10-K, as well as statements about the results of our Dodd-Frank Act and our stress tests, statements about the objectives and effectiveness of our business continuity plan, information security program, risk management and liquidity policies, statements about our resolution plan and resolution strategy and their implications for our debtholders and other stakeholders, statements about the design and effectiveness of our resolution capital and liquidity models and our triggers and alerts framework, statements about trends in or growth opportunities for our businesses, statements about our future status, activities or reporting under U.S. or non-U.S. banking and financial regulation, statements about our investment banking transaction backlog, statements about our expected tax rate, statements about the estimated impact of new accounting standards, statements about the level of capital actions, statements about our expected interest income, statements about our credit exposures, statements about our preparations for Brexit, including our plan to manage a hard Brexit scenario, statements about the replacement of LIBOR and other IBORs and the objectives of our program related to the transition from IBORs to alternative risk-free reference rates, and statements about the adequacy of our allowance for credit losses.

By identifying these statements for you in this manner, we are alerting you to the possibility that our actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Important factors that could cause our actual results and financial condition to differ from those indicated in these forward-looking statements include, among others, those described below and in "Risk Factors" in Part I, Item 1A of this Form 10-K.

Statements about our investment banking transaction backlog are subject to the risk that the terms of these transactions may be modified or that they may not be completed at all; therefore, the net revenues, if any, that we actually earn from these transactions may differ, possibly materially, from those currently expected. Important factors that could result in a modification of the terms of a transaction or a transaction not being completed include, in the case of underwriting transactions, a decline or continued weakness in general economic conditions, outbreak of hostilities, volatility in the securities markets generally or an adverse development with respect to the issuer of the securities and, in the case of financial advisory transactions, a decline in the securities markets, an inability to obtain adequate financing, an adverse development with respect to a party to the transaction or a failure to obtain a required regulatory approval. For information about other important factors that could adversely affect our investment banking transactions, see "Risk Factors" in Part I, Item 1A of this Form 10-K.

Statements about our expected 2019 effective income tax rate are subject to the risk that our tax rate may differ from the anticipated rate indicated in such statements, possibly materially, due to, among other things, changes in our earnings mix, our profitability and entities in which we generate profits, the assumptions we have made in forecasting our expected tax rate, as well as guidance that may be issued by the U.S. Internal Revenue Service.

We provided in this filing information regarding our NSFR. The statements with respect to our NSFR are forward-looking statements, based on our current interpretation, expectations and understandings of the relevant proposal, and reflect significant assumptions about the treatment of various assets and liabilities and the manner in which our NSFR is calculated. As a result, the methods used to calculate our NSFR may differ, possibly materially, from those used in calculating our NSFR for any future disclosures. The ultimate methods of calculating our NSFR will depend on, among other things, rulemaking from the U.S. federal bank regulatory agencies and the development of market practices and standards.

Item 1A. Risk Factors

We face a variety of risks that are substantial and inherent in our businesses, including market, liquidity, credit, operational, legal, regulatory and reputational risks. The following are some of the more important factors that could affect our businesses.

Our businesses have been and may continue to be adversely affected by conditions in the global financial markets and economic conditions generally.

Our businesses, by their nature, do not produce predictable earnings, and all of our businesses are materially affected by conditions in the global financial markets and economic conditions generally, both directly and through their impact on client activity levels. These conditions can change suddenly and negatively.

Our financial performance is highly dependent on the environment in which our businesses operate. A favorable business environment is generally characterized by, among other factors, high global gross domestic product growth, regulatory and market conditions which result in transparent, liquid and efficient capital markets, low inflation, high business and investor confidence, stable geopolitical conditions, clear regulations and strong business earnings. Unfavorable or uncertain economic and market conditions can be caused by: concerns about sovereign defaults; uncertainty concerning fiscal or monetary policy, government shutdowns, debt ceilings or funding; the extent of and uncertainty about tax and other regulatory changes; declines in economic growth, business activity or investor or business confidence; limitations on the availability or increases in the cost of credit and capital; illiquid markets; increases in inflation, interest rates, exchange rate or basic commodity price volatility or default rates; the imposition of tariffs or other limitations on international trade and travel; outbreaks of domestic or international tensions or hostilities, terrorism, nuclear proliferation, cybersecurity threats or attacks and other forms of disruption to or curtailment of global communication, energy transmission or transportation networks or other geopolitical instability or uncertainty, such as Brexit; corporate, political or other scandals that reduce investor confidence in capital markets; extreme weather events or other natural disasters or pandemics; or a combination of these or other factors.

The financial services industry and the securities markets have been materially and adversely affected in the past by significant declines in the values of nearly all asset classes and by a serious lack of liquidity. In addition, concerns about European sovereign debt risk and its impact on the European banking system, the impact of Brexit, the imposition of tariffs by the U.S. and by other countries in response thereto, and changes in interest rates and other market conditions or actual changes in interest rates and other market conditions, have resulted, at times, in significant volatility while negatively impacting the levels of client activity.

General uncertainty about economic, political and market activities, and the scope, timing and impact of regulatory reform, as well as weak consumer, investor and CEO confidence resulting in large part from such uncertainty, continues to negatively impact client activity, which adversely affects many of our businesses. Periods of low volatility and periods of high volatility combined with a lack of liquidity, have at times had an unfavorable impact on our market-making businesses.

Financial institution returns in many countries may be negatively impacted by increased funding costs due in part to the lack of perceived government support of such institutions in the event of future financial crises relative to financial institutions in countries in which governmental support is maintained. In addition, liquidity in the financial markets has also been negatively impacted as market participants and market practices and structures continue to adjust to new regulations.

Our revenues and profitability and those of our competitors have been and will continue to be impacted by requirements relating to capital, additional loss-absorbing capacity, leverage, minimum liquidity and long-term funding levels, requirements related to resolution and recovery planning, derivatives clearing and margin rules and levels of regulatory oversight, as well as limitations on which and, if permitted, how certain business activities may be carried out by financial institutions.

The degree to which these and other changes since the financial crisis continue to have an impact on the profitability of financial institutions will depend on the effect of regulations adopted after 2008 and new regulations, the manner in which markets, market participants and financial institutions have continued to adapt to these regulations, and the prevailing economic and financial market conditions. However, there is a significant risk that such changes will negatively impact the absolute level of revenues, profitability and return on equity for us and other financial institutions.

Our businesses and those of our clients are subject to extensive and pervasive regulation around the world.

As a participant in the financial services industry and a systemically important financial institution, we are subject to extensive regulation in jurisdictions around the world. We face the risk of significant intervention by law enforcement, regulatory and taxing authorities, as well as private litigation, in all jurisdictions in which we conduct our businesses. In many cases, our activities may be subject to overlapping and divergent regulation in different jurisdictions. Among other things, as a result of law enforcement authorities, regulators or private parties challenging our compliance with existing laws and regulations, we or our employees could be fined or criminally sanctioned, prohibited from engaging in some of our business activities, subject to limitations or conditions on our business activities, including higher capital requirements, or subjected to new or substantially higher taxes or other governmental charges in connection with the conduct of our businesses or with respect to our employees. Such limitations or conditions may limit our business activities and negatively impact our profitability.

In addition to the impact on the scope and profitability of our business activities, day-to-day compliance with existing laws and regulations, in particular those adopted since 2008, has involved and will, except to the extent that some of such regulations are modified or otherwise repealed, continue to involve significant amounts of time, including that of our senior leaders and that of a large number of dedicated compliance and other reporting and operational personnel, all of which may negatively impact our profitability.

If there are new laws or regulations or changes in the enforcement of existing laws or regulations applicable to our businesses or those of our clients, including capital, liquidity, leverage, long-term debt, total loss-absorbing capacity and margin requirements, restrictions on leveraged lending or other business practices, reporting requirements, requirements relating to recovery and resolution planning, tax burdens and compensation restrictions, that are imposed on a limited subset of financial institutions (either based on size, method of funding, activities, geography or other criteria), compliance with these new laws or regulations, or changes in the enforcement of existing laws or regulations, could adversely affect our ability to compete effectively with other institutions that are not affected in the same way. In addition, regulation imposed on financial institutions or market participants generally, such as taxes on financial transactions, could adversely impact levels of market activity more broadly, and thus impact our businesses.

These developments could impact our profitability in the affected jurisdictions, or even make it uneconomic for us to continue to conduct all or certain of our businesses in such jurisdictions, or could cause us to incur significant costs associated with changing our business practices, restructuring our businesses, moving all or certain of our businesses and our employees to other locations or complying with applicable capital requirements, including reducing dividends or share repurchases, liquidating assets or raising capital in a manner that adversely increases our funding costs or otherwise adversely affects our shareholders and creditors.

U.S. and non-U.S. regulatory developments, in particular the Dodd-Frank Act and Basel III, have significantly altered the regulatory framework within which we operate and have adversely affected and may in the future affect our profitability.

Among the aspects of the Dodd-Frank Act that have affected or may in the future affect our businesses are: increased capital, liquidity and reporting requirements; limitations on activities in which we may engage; increased regulation of and restrictions on OTC derivatives markets and transactions; limitations on incentive compensation; limitations on affiliate transactions; requirements to reorganize or limit activities in connection with recovery and resolution planning; increased deposit insurance assessments; and increased standards of care for broker-dealers and investment advisers in dealing with clients. The implementation of higher capital requirements, the LCR, the NSFR, requirements relating to long-term debt and total loss-absorbing capacity and the prohibition on proprietary trading and the sponsorship of, or investment in, covered funds by the Volcker Rule may continue to adversely affect our profitability and competitive position, particularly if these requirements do not apply equally to our competitors or are not implemented uniformly across jurisdictions.

As described in "Business — Regulation — Banking Supervision and Regulation" in Part I, Item 1 of this Form 10-K, Group Inc.'s proposed capital actions and capital plan are reviewed by the FRB as part of the CCAR process. If the FRB objects to our proposed capital actions in our capital plan, Group Inc. could be prohibited from taking some or all of the proposed capital actions, including increasing or paying dividends on common or preferred stock or repurchasing common stock or other capital securities. Our inability to carry out our proposed capital actions could, among other things, prevent us from returning capital to our shareholders and impact our return on equity. Additionally, as a consequence of our designation as a G-SIB, we are subject to the G-SIB buffer. Our G-SIB buffer is updated annually based on financial data from the prior year. Expansion of our businesses or growth in our balance sheet may result in an increase in our G-SIB buffer and a corresponding increase in our capital requirements.

We are also subject to laws and regulations, such as the GDPR, relating to the privacy of the information of clients, employees or others, and any failure to comply with these laws and regulations could expose us to liability and/or reputational damage. As new privacy-related laws and regulations are implemented, the time and resources needed for us to comply with such laws and regulations, as well as our potential liability for non-compliance and reporting obligations in the case of data breaches, may significantly increase.

In addition, our businesses are increasingly subject to laws and regulations relating to surveillance, encryption and data on-shoring in the jurisdictions in which we operate. Compliance with these laws and regulations may require us to change our policies, procedures and technology for information security, which could, among other things, make us more vulnerable to cyber attacks and misappropriation, corruption or loss of information or technology.

We have entered into new consumer-oriented deposit-taking and lending businesses, and we currently expect to expand the product and geographic scope of our offerings. Entering into such new businesses, as with any new business, subjects us to numerous additional regulations in the jurisdictions in which these businesses operate. Not only are these regulations extensive, but they involve types of regulations and supervision, as well as regulatory compliance risks, that we have not previously encountered. The level of regulatory scrutiny and the scope of regulations affecting financial interactions with consumers is often much greater than that associated with doing business with institutions and high-net-worth individuals. Complying with such new regulations is time-consuming, costly and presents new and increased risks.

Increasingly, regulators and courts have sought to hold financial institutions liable for the misconduct of their clients where such regulators and courts have determined that the financial institution should have detected that the client was engaged in wrongdoing, even though the financial institution had no direct knowledge of the activities engaged in by its client. Regulators and courts have also increasingly found liability as a "control person" for activities of entities in which financial institutions or funds controlled by financial institutions have an investment, but which they do not actively manage. In addition, regulators and courts continue to seek to establish "fiduciary" obligations to counterparties to which no such duty had been assumed to exist. To the extent that such efforts are successful, the cost of, and liabilities associated with, engaging in brokerage, clearing, market-making, prime brokerage, investing and other similar activities could increase significantly. To the extent that we have fiduciary obligations in connection with acting as a financial adviser, investment adviser or in other roles for individual, institutional, sovereign or investment fund clients, any breach, or even an alleged breach, of such obligations could have materially negative legal, regulatory and reputational consequences.

For information about the extensive regulation to which our businesses are subject, see "Business — Regulation" in Part I, Item 1 of this Form 10-K.

Our businesses have been and may be adversely affected by declining asset values. This is particularly true for those businesses in which we have net "long" positions, receive fees based on the value of assets managed, or receive or post collateral.

Many of our businesses have net "long" positions in debt securities, loans, derivatives, mortgages, equities (including private equity and real estate) and most other asset classes. These include positions we take when we act as a principal to facilitate our clients' activities, including our exchange-based market-making activities, or commit large amounts of capital to maintain positions in interest rate and credit products, as well as through our currencies, commodities, equities and mortgage-related activities. In addition, we invest in similar asset classes. Substantially all of our investing and market-making positions and a portion of our loans are marked-to-market on a daily basis and declines in asset values directly and immediately impact our earnings, unless we have effectively "hedged" our exposures to such declines.

In certain circumstances (particularly in the case of credit products, including leveraged loans, and private equities or other securities that are not freely tradable or lack established and liquid trading markets), it may not be possible or economic to hedge such exposures and to the extent that we do so the hedge may be ineffective or may greatly reduce our ability to profit from increases in the values of the assets. Sudden declines and significant volatility in the prices of assets may substantially curtail or eliminate the trading markets for certain assets, which may make it difficult to sell, hedge or value such assets. The inability to sell or effectively hedge assets reduces our ability to limit losses in such positions and the difficulty in valuing assets may negatively affect our capital, liquidity or leverage ratios, increase our funding costs and generally require us to maintain additional capital.

In our exchange-based market-making activities, we are obligated by stock exchange rules to maintain an orderly market, including by purchasing securities in a declining market. In markets where asset values are declining and in volatile markets, this results in losses and an increased need for liquidity.

We receive asset-based management fees based on the value of our clients' portfolios or investment in funds managed by us and, in some cases, we also receive incentive fees based on increases in the value of such investments. Declines in asset values reduce the value of our clients' portfolios or fund assets, which in turn reduce the fees we earn for managing such assets.

We post collateral to support our obligations and receive collateral to support the obligations of our clients and counterparties in connection with our client execution businesses. When the value of the assets posted as collateral or the credit ratings of the party posting collateral decline, the party posting the collateral may need to provide additional collateral or, if possible, reduce its trading position. An example of such a situation is a "margin call" in connection with a brokerage account. Therefore, declines in the value of asset classes used as collateral mean that either the cost of funding positions is increased or the size of positions is decreased.

If we are the party providing collateral, this can increase our costs and reduce our profitability and if we are the party receiving collateral, this can also reduce our profitability by reducing the level of business done with our clients and counterparties. In addition, volatile or less liquid markets increase the difficulty of valuing assets, which can lead to costly and time-consuming disputes over asset values and the level of required collateral, as well as increased credit risk to the recipient of the collateral due to delays in receiving adequate collateral.

In cases where we foreclose on collateral, sudden declines in the value or liquidity of such collateral may, despite credit monitoring, over-collateralization, the ability to call for additional collateral or the ability to force repayment of the underlying obligation, result in significant losses to us, especially where there is a single type of collateral supporting the obligation. In addition, we have been, and may in the future be, subject to claims that the foreclosure was not permitted under the legal documents, was conducted in an improper manner or caused a client or counterparty to go out of business.

Our businesses have been and may be adversely affected by disruptions in the credit markets, including reduced access to credit and higher costs of obtaining credit.

Widening credit spreads, as well as significant declines in the availability of credit, have in the past adversely affected our ability to borrow on a secured and unsecured basis and may do so in the future. We fund ourselves on an unsecured basis by issuing long-term debt, by accepting deposits at our bank subsidiaries, by issuing hybrid financial instruments or by obtaining loans or lines of credit from commercial or other banking entities. We seek to finance many of our assets on a secured basis. Any disruptions in the credit markets may make it harder and more expensive to obtain funding for our businesses. If our available funding is limited or we are forced to fund our operations at a higher cost, these conditions may require us to curtail our business activities and increase our cost of funding, both of which could reduce our profitability, particularly in our businesses that involve investing, lending and market making.

Our clients engaging in mergers, acquisitions and other types of strategic transactions often rely on access to the secured and unsecured credit markets to finance their transactions. A lack of available credit or an increased cost of credit can adversely affect the size, volume and timing of our clients' merger and acquisition transactions, particularly large transactions, and adversely affect our financial advisory and underwriting businesses.

Our credit businesses have been and may in the future be negatively affected by a lack of liquidity in credit markets. A lack of liquidity reduces price transparency, increases price volatility and decreases transaction volumes and size, all of which can increase transaction risk or decrease the profitability of such businesses.

Our market-making activities have been and may be affected by changes in the levels of market volatility.

Certain of our market-making activities depend on market volatility to provide trading and arbitrage opportunities to our clients, and decreases in volatility have reduced and may in the future reduce these opportunities and the level of client activity associated with them and adversely affect the results of these activities. On the other hand, increased volatility, while it can increase trading volumes and spreads, also increases risk as measured by Value-at-Risk (VaR) and may expose us to increased risks in connection with our market-making activities or cause us to reduce our market-making inventory in order to avoid increasing our VaR. Limiting the size of our market-making positions can adversely affect our profitability. In periods when volatility is increasing, but asset values are declining significantly, it may not be possible to sell assets at all or it may only be possible to do so at steep discounts. In such circumstances we may be forced to either take on additional risk or to realize losses in order to decrease our VaR. In addition, increases in volatility increase the level of our RWAs, which increases our capital requirements.

Our investment banking, client execution and investment management businesses have been adversely affected and may in the future be adversely affected by market uncertainty or lack of confidence among investors and CEOs due to general declines in economic activity and other unfavorable economic, geopolitical or market conditions.

Our investment banking business has been, and may in the future be, adversely affected by market conditions. Poor economic conditions and other adverse geopolitical conditions can adversely affect and have in the past adversely affected investor and CEO confidence, resulting in significant industry-wide declines in the size and number of underwritings and of financial advisory transactions, which could have an adverse effect on our revenues and our profit margins. In particular, because a significant portion of our investment banking revenues is derived from our participation in large transactions, a decline in the number of large transactions would adversely affect our investment banking business.

In certain circumstances, market uncertainty or general declines in market or economic activity may affect our client execution businesses by decreasing levels of overall activity or by decreasing volatility, but at other times market uncertainty and even declining economic activity may result in higher trading volumes or higher spreads or both.

Market uncertainty, volatility and adverse economic conditions, as well as declines in asset values, may cause our clients to transfer their assets out of our funds or other products or their brokerage accounts and result in reduced net revenues, principally in our investment management business. Even if clients do not withdraw their funds, they may invest them in products that generate less fee income.

Our investment management business may be affected by the poor investment performance of our investment products or a client preference for products other than those which we offer or for products that generate lower fees.

Poor investment returns in our investment management business, due to either general market conditions or underperformance (relative to our competitors or to benchmarks) by funds or accounts that we manage or investment products that we design or sell, affects our ability to retain existing assets and to attract new clients or additional assets from existing clients. This could affect the management and incentive fees that we earn on assets under supervision or the commissions and net spreads that we earn for selling other investment products, such as structured notes or derivatives. To the extent that our clients choose to invest in products that we do not currently offer, we will suffer outflows and a loss of management fees. Further, if, due to changes in investor sentiment or the relative performance of certain asset classes or otherwise, clients invest in products that generate lower fees, our investment management business could be adversely affected.

We may incur losses as a result of ineffective risk management processes and strategies.

We seek to monitor and control our risk exposure through a risk and control framework encompassing a variety of separate but complementary financial, credit, operational, compliance and legal reporting systems, internal controls, management review processes and other mechanisms. Our risk management process seeks to balance our ability to profit from market-making, investing or lending positions, and underwriting activities, with our exposure to potential losses. While we employ a broad and diversified set of risk monitoring and risk mitigation techniques, those techniques and the judgments that accompany their application cannot anticipate every economic and financial outcome or the specifics and timing of such outcomes. Thus, we may, in the course of our activities, incur losses. Market conditions in recent years have involved unprecedented dislocations and highlight the limitations inherent in using historical data to manage risk.

The models that we use to assess and control our risk exposures reflect assumptions about the degrees of correlation or lack thereof among prices of various asset classes or other market indicators. In times of market stress or other unforeseen circumstances, such as those that occurred during 2008 and early 2009, and to some extent since 2011, previously uncorrelated indicators may become correlated, or conversely previously correlated indicators may move in different directions. These types of market movements have at times limited the effectiveness of our hedging strategies and have caused us to incur significant losses, and they may do so in the future. These changes in correlation can be exacerbated where other market participants are using risk or trading models with assumptions or algorithms that are similar to ours. In these and other cases, it may be difficult to reduce our risk positions due to the activity of other market participants or widespread market dislocations, including circumstances where asset values are declining significantly or no market exists for certain assets.

In addition, the use of models in connection with risk management and numerous other critical activities presents risks that such models may be ineffective, either because of poor design or ineffective testing, improper or flawed inputs, as well as unpermitted access to such models resulting in unapproved or malicious changes to the model or its inputs.

To the extent that we have positions through our market-making or origination activities or we make investments directly through our investing activities, including private equity, that do not have an established liquid trading market or are otherwise subject to restrictions on sale or hedging, we may not be able to reduce our positions and therefore reduce our risk associated with such positions. In addition, to the extent permitted by applicable law and regulation, we invest our own capital in private equity, credit, real estate and hedge funds that we manage and limitations on our ability to withdraw some or all of our investments in these funds, whether for legal, reputational or other reasons, may make it more difficult for us to control the risk exposures relating to these investments.

Prudent risk management, as well as regulatory restrictions, may cause us to limit our exposure to counterparties, geographic areas or markets, which may limit our business opportunities and increase the cost of our funding or hedging activities.

As we have expanded and intend to continue to expand the product and geographic scope of our offerings of credit products to consumers, we are presented with different credit risks and must expand and adapt our credit risk monitoring and mitigation activities to account for these new business activities. A failure to adequately assess and control such risk exposures could result in losses to us.

For further information about our risk management policies and procedures, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management" in Part II, Item 7 of this Form 10-K.

Our liquidity, profitability and businesses may be adversely affected by an inability to access the debt capital markets or to sell assets or by a reduction in our credit ratings or by an increase in our credit spreads.

Liquidity is essential to our businesses. It is of critical importance to us, as most of the failures of financial institutions have occurred in large part due to insufficient liquidity. Our liquidity may be impaired by an inability to access secured and/or unsecured debt markets, an inability to access funds from our subsidiaries or otherwise allocate liquidity optimally, an inability to sell assets or redeem our investments, or unforeseen outflows of cash or collateral. This situation may arise due to circumstances that we may be unable to control, such as a general market disruption or an operational problem that affects third parties or us, or even by the perception among market participants that we, or other market participants, are experiencing greater liquidity risk.

We employ structured products to benefit our clients and hedge our own risks. The financial instruments that we hold and the contracts to which we are a party are often complex, and these complex structured products often do not have readily available markets to access in times of liquidity stress. Our investing and lending activities may lead to situations where the holdings from these activities represent a significant portion of specific markets, which could restrict liquidity for our positions.

Further, our ability to sell assets may be impaired if there is not generally a liquid market for such assets, as well as in circumstances where other market participants are seeking to sell similar otherwise generally liquid assets at the same time, as is likely to occur in a liquidity or other market crisis or in response to changes to rules or regulations. In addition, financial institutions with which we interact may exercise set-off rights or the right to require additional collateral, including in difficult market conditions, which could further impair our liquidity.

Our credit ratings are important to our liquidity. A reduction in our credit ratings could adversely affect our liquidity and competitive position, increase our borrowing costs, limit our access to the capital markets or trigger our obligations under certain provisions in some of our trading and collateralized financing contracts. Under these provisions, counterparties could be permitted to terminate contracts with us or require us to post additional collateral. Termination of our trading and collateralized financing contracts could cause us to sustain losses and impair our liquidity by requiring us to find other sources of financing or to make significant cash payments or securities movements.

As of December 2018, our counterparties could have called for additional collateral or termination payments related to our net derivative liabilities under bilateral agreements in an aggregate amount of $262 million in the event of a one-notch downgrade of our credit ratings and $959 million in the event of a two-notch downgrade of our credit ratings. A downgrade by any one rating agency, depending on the agency's relative ratings of us at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies. For further information about our credit ratings, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management — Liquidity Risk Management — Credit Ratings" in Part II, Item 7 of this Form 10-K.

Our cost of obtaining long-term unsecured funding is directly related to our credit spreads (the amount in excess of the interest rate of U.S. Treasury securities (or other benchmark securities) of the same maturity that we need to pay to our debt investors). Increases in our credit spreads can significantly increase our cost of this funding. Changes in credit spreads are continuous, market-driven, and subject at times to unpredictable and highly volatile movements. Our credit spreads are also influenced by market perceptions of our creditworthiness. In addition, our credit spreads may be influenced by movements in the costs to purchasers of credit default swaps referenced to our long-term debt. The market for credit default swaps has proven to be extremely volatile and at times has lacked a high degree of transparency or liquidity.

Regulatory changes relating to liquidity may also negatively impact our results of operations and competitive position. Recently, numerous regulations have been adopted or proposed to introduce more stringent liquidity requirements for large financial institutions. These regulations address, among other matters, liquidity stress testing, minimum liquidity requirements, wholesale funding, limitations on the issuance of short-term debt and structured notes and prohibitions on parent guarantees that are subject to certain cross-defaults. New and prospective liquidity-related regulations may overlap with, and be impacted by, other regulatory changes, including rules relating to minimum long-term debt requirements and TLAC, guidance on the treatment of brokered deposits and the capital, leverage and resolution and recovery frameworks applicable to large financial institutions. Given the overlap and complex interactions among these new and prospective regulations, they may have unintended cumulative effects, and their full impact will remain uncertain, while regulatory reforms are being adopted and market practices develop in response to such reforms.

A failure to appropriately identify and address potential conflicts of interest could adversely affect our businesses.

Due to the broad scope of our businesses and our client base, we regularly address potential conflicts of interest, including situations where our services to a particular client or our own investments or other interests conflict, or are perceived to conflict, with the interests of another client, as well as situations where one or more of our businesses have access to material non-public information that may not be shared with our other businesses and situations where we may be a creditor of an entity with which we also have an advisory or other relationship.

In addition, our status as a BHC subjects us to heightened regulation and increased regulatory scrutiny by the FRB with respect to transactions between GS Bank USA and entities that are or could be viewed as affiliates of ours and, under the Volcker Rule, transactions between Goldman Sachs and certain covered funds.

We have extensive procedures and controls that are designed to identify and address conflicts of interest, including those designed to prevent the improper sharing of information among our businesses. However, appropriately identifying and dealing with conflicts of interest is complex and difficult, and our reputation, which is one of our most important assets, could be damaged and the willingness of clients to enter into transactions with us may be affected if we fail, or appear to fail, to identify, disclose and deal appropriately with conflicts of interest. In addition, potential or perceived conflicts could give rise to litigation or regulatory enforcement actions.

A failure in our operational systems or infrastructure, or those of third parties, as well as human error or malfeasance, could impair our liquidity, disrupt our businesses, result in the disclosure of confidential information, damage our reputation and cause losses.

Our businesses are highly dependent on our ability to process and monitor, on a daily basis, a very large number of transactions, many of which are highly complex and occur at high volumes and frequencies, across numerous and diverse markets in many currencies. These transactions, as well as the information technology services we provide to clients, often must adhere to client-specific guidelines, as well as legal and regulatory standards.

Many rules and regulations worldwide govern our obligations to execute transactions and report such transactions and other information to regulators, exchanges and investors. Compliance with these legal and reporting requirements can be challenging, and we have been, and may in the future be, subject to regulatory fines and penalties for failing to follow these rules or to report timely, accurate and complete information in accordance with such rules. As such requirements expand, compliance with these rules and regulations has become more challenging.

As our client base, including through our consumer businesses, and our geographical reach expand and the volume, speed, frequency and complexity of transactions, especially electronic transactions (as well as the requirements to report such transactions on a real-time basis to clients, regulators and exchanges) increase, developing and maintaining our operational systems and infrastructure becomes more challenging, and the risk of systems or human error in connection with such transactions increases, as well as the potential consequences of such errors due to the speed and volume of transactions involved and the potential difficulty associated with discovering such errors quickly enough to limit the resulting consequences.

Our financial, accounting, data processing or other operational systems and facilities may fail to operate properly or become disabled as a result of events that are wholly or partially beyond our control, such as a spike in transaction volume, adversely affecting our ability to process these transactions or provide these services. We must continuously update these systems to support our operations and growth and to respond to changes in regulations and markets, and invest heavily in systemic controls and training to ensure that such transactions do not violate applicable rules and regulations or, due to errors in processing such transactions, adversely affect markets, our clients and counterparties or us.

Enhancements and updates to systems, as well as the requisite training, including in connection with the integration of new businesses, entail significant costs and create risks associated with implementing new systems and integrating them with existing ones.

The use of computing devices and phones is critical to the work done by our employees and the operation of our systems and businesses and those of our clients and our third-party service providers and vendors. Fundamental security flaws in computer chips found in many types of these computing devices and phones have been reported in the past and may be discovered in the future. Addressing this and similar issues could be costly and affect the performance of these businesses and systems, and operational risks may be incurred in applying fixes and there may still be residual security risks.

Additionally, although the prevalence and scope of applications of distributed ledger technology and similar technologies is growing, the technology is also nascent and may be vulnerable to cyber attacks or have other inherent weaknesses. We may be, or may become, exposed to risks related to distributed ledger technology through our facilitation of clients' activities involving financial products linked to distributed ledger technology, such as blockchain or cryptocurrencies, our investments in companies that seek to develop platforms based on distributed ledger technology, and the use of distributed ledger technology by third-party vendors, clients, counterparties, clearing houses and other financial intermediaries.

Notwithstanding the proliferation of technology and technology-based risk and control systems, our businesses ultimately rely on people as our greatest resource, and, from time-to-time, they make mistakes or engage in violations of applicable policies, laws, rules or procedures that are not always caught immediately by our technological processes or by our controls and other procedures, which are intended to prevent and detect such errors or violations. These can include calculation errors, mistakes in addressing emails, errors in software or model development or implementation, or simple errors in judgment, as well as intentional efforts to ignore or circumvent applicable policies, laws, rules or procedures. Human errors and malfeasance, even if promptly discovered and remediated, can result in material losses and liabilities for us.

In addition, we face the risk of operational failure or significant operational delay, termination or capacity constraints of any of the clearing agents, exchanges, clearing houses or other financial intermediaries we use to facilitate our securities and derivatives transactions, and as our interconnectivity with our clients grows, we increasingly face the risk of operational failure or significant operational delay with respect to our clients' systems.

In recent years, there has been significant consolidation among clearing agents, exchanges and clearing houses and an increasing number of derivative transactions are now or in the near future will be cleared on exchanges, which has increased our exposure to operational failure or significant operational delay, termination or capacity constraints of the particular financial intermediaries that we use and could affect our ability to find adequate and cost-effective alternatives in the event of any such failure, delay, termination or constraint. Industry consolidation, whether among market participants or financial intermediaries, increases the risk of operational failure or significant operational delay as disparate complex systems need to be integrated, often on an accelerated basis.

Furthermore, the interconnectivity of multiple financial institutions with central agents, exchanges and clearing houses, and the increased centrality of these entities, increases the risk that an operational failure at one institution or entity may cause an industry-wide operational failure that could materially impact our ability to conduct business. Any such failure, termination or constraint could adversely affect our ability to effect transactions, service our clients, manage our exposure to risk or expand our businesses or result in financial loss or liability to our clients, impairment of our liquidity, disruption of our businesses, regulatory intervention or reputational damage.

Despite the resiliency plans and facilities we have in place, our ability to conduct business may be adversely impacted by a disruption in the infrastructure that supports our businesses and the communities in which we are located. This may include a disruption involving electrical, satellite, undersea cable or other communications, internet, transportation or other services facilities used by us, our employees or third parties with which we conduct business, including cloud service providers. These disruptions may occur as a result of events that affect only our buildings or systems or those of such third parties, or as a result of events with a broader impact globally, regionally or in the cities where those buildings or systems are located, including, but not limited to, natural disasters, war, civil unrest, terrorism, economic or political developments, pandemics and weather events.

In addition, although we seek to diversify our third-party vendors to increase our resiliency, we are also exposed to the risk that a disruption or other information technology event at a common service provider to our vendors could impede their ability to provide products or services to us. We may not be able to effectively monitor or mitigate operational risks relating to our vendors' use of common service providers.

Nearly all of our employees in our primary locations, including the New York metropolitan area, London, Bengaluru, Hong Kong, Tokyo and Salt Lake City, work in close proximity to one another, in one or more buildings. Notwithstanding our efforts to maintain business continuity, given that our headquarters and the largest concentration of our employees are in the New York metropolitan area, and our two principal office buildings in the New York area both are located on the waterfront of the Hudson River, depending on the intensity and longevity of the event, a catastrophic event impacting our New York metropolitan area offices, including a terrorist attack, extreme weather event or other hostile or catastrophic event, could negatively affect our business. If a disruption occurs in one location and our employees in that location are unable to occupy our offices or communicate with or travel to other locations, our ability to service and interact with our clients may suffer, and we may not be able to successfully implement contingency plans that depend on communication or travel.

A failure to protect our computer systems, networks and information, and our clients' information, against cyber attacks and similar threats could impair our ability to conduct our businesses, result in the disclosure, theft or destruction of confidential information, damage our reputation and cause losses.

Our operations rely on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. There have been a number of highly publicized cases involving financial services companies, consumer-based companies, governmental agencies and other organizations reporting the unauthorized disclosure of client, customer or other confidential information in recent years, as well as cyber attacks involving the dissemination, theft and destruction of corporate information or other assets, as a result of failure to follow procedures by employees or contractors or as a result of actions by third parties, including actions by foreign governments. There have also been several highly publicized cases where hackers have requested "ransom" payments in exchange for not disclosing customer information or for restoring access to information or systems.

We are regularly the target of attempted cyber attacks, including denial-of-service attacks, and must continuously monitor and develop our systems to protect our technology infrastructure and data from misappropriation or corruption. We may face an increasing number of attempted cyber attacks as we expand our mobile- and other internet-based products and services, as well as our usage of mobile and cloud technologies and as we provide more of these services to a greater number of individual consumers. The increasing migration of firm communication and other platforms from firm-provided devices to employee-owned devices presents additional risks of cyber attacks. In addition, due to our interconnectivity with third-party vendors (and their respective service providers), central agents, exchanges, clearing houses and other financial institutions, we could be adversely impacted if any of them is subject to a successful cyber attack or other information security event. These effects could include the loss of access to information or services from the third party subject to the cyber attack or other information security event, which could, in turn, interrupt certain of our businesses.

Despite our efforts to ensure the integrity of our systems and information, we may not be able to anticipate, detect or implement effective preventive measures against all cyber threats, especially because the techniques used are increasingly sophisticated, change frequently and are often not recognized until launched. Cyber attacks can originate from a variety of sources, including third parties who are affiliated with or sponsored by foreign governments or are involved with organized crime or terrorist organizations. Third parties may also attempt to place individuals within the firm or induce employees, clients or other users of our systems to disclose sensitive information or provide access to our data or that of our clients, and these types of risks may be difficult to detect or prevent.

Although we take protective measures and endeavor to modify them as circumstances warrant, our computer systems, software and networks may be vulnerable to unauthorized access, misuse, computer viruses or other malicious code, cyber attacks on our vendors and other events that could have a security impact. Due to the complexity and interconnectedness of our systems, the process of enhancing our protective measures can itself create a risk of systems disruptions and security issues.

If one or more of such events occur, this potentially could jeopardize our or our clients' or counterparties' confidential and other information processed and stored in, and transmitted through, our computer systems and networks, or otherwise cause interruptions or malfunctions in our, our clients', our counterparties' or third parties' operations, which could impact their ability to transact with us or otherwise result in legal or regulatory action, significant losses or reputational damage. In addition, such an event could persist for an extended period of time before being detected, and, following detection, it could take considerable time for us to obtain full and reliable information about the extent, amount and type of information compromised. During the course of an investigation, we may not know the full impact of the event and how to remediate it, and actions, decisions and mistakes that are taken or made may further increase the negative effects of the event on our business, results of operations and reputation.

The increased use of mobile and cloud technologies can heighten these and other operational risks. We expect to expend significant additional resources on an ongoing basis to modify our protective measures and to investigate and remediate vulnerabilities or other exposures, but these measures may be ineffective and we may be subject to legal or regulatory action, and financial losses that are either not insured against or not fully covered through any insurance maintained by us. Certain aspects of the security of such technologies are unpredictable or beyond our control, and the failure by mobile technology and cloud service providers to adequately safeguard their systems and prevent cyber attacks could disrupt our operations and result in misappropriation, corruption or loss of confidential and other information. In addition, there is a risk that encryption and other protective measures, despite their sophistication, may be defeated, particularly to the extent that new computing technologies vastly increase the speed and computing power available.

We routinely transmit and receive personal, confidential and proprietary information by email and other electronic means. We have discussed and worked with clients, vendors, service providers, counterparties and other third parties to develop secure transmission capabilities and protect against cyber attacks, but we do not have, and may be unable to put in place, secure capabilities with all of our clients, vendors, service providers, counterparties and other third parties and we may not be able to ensure that these third parties have appropriate controls in place to protect the confidentiality of the information. An interception, misuse or mishandling of personal, confidential or proprietary information being sent to or received from a client, vendor, service provider, counterparty or other third party could result in legal liability, regulatory action and reputational harm.

Group Inc. is a holding company and is dependent for liquidity on payments from its subsidiaries, many of which are subject to restrictions.

Group Inc. is a holding company and, therefore, depends on dividends, distributions and other payments from its subsidiaries to fund dividend payments and to fund all payments on its obligations, including debt obligations. Many of our subsidiaries, including our broker-dealer and bank subsidiaries, are subject to laws that restrict dividend payments or authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to Group Inc.

In addition, our broker-dealer and bank subsidiaries are subject to restrictions on their ability to lend or transact with affiliates and to minimum regulatory capital and other requirements, as well as restrictions on their ability to use funds deposited with them in brokerage or bank accounts to fund their businesses. Additional restrictions on related-party transactions, increased capital and liquidity requirements and additional limitations on the use of funds on deposit in bank or brokerage accounts, as well as lower earnings, can reduce the amount of funds available to meet the obligations of Group Inc., including under the FRB's source of strength requirement, and even require Group Inc. to provide additional funding to such subsidiaries. Restrictions or regulatory action of that kind could impede access to funds that Group Inc. needs to make payments on its obligations, including debt obligations, or dividend payments. In addition, Group Inc.'s right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to the prior claims of the subsidiary's creditors.

There has been a trend towards increased regulation and supervision of our subsidiaries by the governments and regulators in the countries in which those subsidiaries are located or do business. Concerns about protecting clients and creditors of financial institutions that are controlled by persons or entities located outside of the country in which such entities are located or do business have caused or may cause a number of governments and regulators to take additional steps to "ring fence" or require internal total loss-absorbing capacity at such entities in order to protect clients and creditors of such entities in the event of financial difficulties involving such entities. The result has been and may continue to be additional limitations on our ability to efficiently move capital and liquidity among our affiliated entities, thereby increasing the overall level of capital and liquidity required by us on a consolidated basis.

Furthermore, Group Inc. has guaranteed the payment obligations of certain of its subsidiaries, including GS&Co. and GS Bank USA, subject to certain exceptions. In addition, Group Inc. guarantees many of the obligations of its other consolidated subsidiaries on a transaction-by-transaction basis, as negotiated with counterparties. These guarantees may require Group Inc. to provide substantial funds or assets to its subsidiaries or their creditors or counterparties at a time when Group Inc. is in need of liquidity to fund its own obligations.

The requirements for Group Inc. and GS Bank USA to develop and submit recovery and resolution plans to regulators, and the incorporation of feedback received from regulators, may require us to increase capital or liquidity levels or issue additional long-term debt at Group Inc. or particular subsidiaries or otherwise incur additional or duplicative operational or other costs at multiple entities, and may reduce our ability to provide Group Inc. guarantees of the obligations of our subsidiaries or raise debt at Group Inc. Resolution planning may also impair our ability to structure our intercompany and external activities in a manner that we may otherwise deem most operationally efficient. Furthermore, arrangements to facilitate our resolution planning may cause us to be subject to additional taxes. Any such limitations or requirements would be in addition to the legal and regulatory restrictions described above on our ability to engage in capital actions or make intercompany dividends or payments.

See "Business — Regulation" in Part I, Item 1 of this Form 10-K for further information about regulatory restrictions.

The application of regulatory strategies and requirements in the U.S. and non-U.S. jurisdictions to facilitate the orderly resolution of large financial institutions could create greater risk of loss for Group Inc.'s security holders.

As described in "Business — Regulation — Banking Supervision and Regulation — Insolvency of an Insured Depository Institution or a Bank Holding Company," if the FDIC is appointed as receiver under OLA, the rights of Group Inc.'s creditors would be determined under OLA, and substantial differences exist in the rights of creditors between OLA and the U.S. Bankruptcy Code, including the right of the FDIC under OLA to disregard the strict priority of creditor claims in some circumstances, which could have a material adverse effect on debtholders.

The FDIC has announced that a single point of entry strategy may be a desirable strategy under OLA to resolve a large financial institution such as Group Inc. in a manner that would, among other things, impose losses on shareholders, debtholders and other creditors of the top-tier BHC (in our case, Group Inc.), while the BHC's subsidiaries may continue to operate. It is possible that the application of the single point of entry strategy under OLA, in which Group Inc. would be the only entity to enter resolution proceedings (and its material broker-dealer, bank and other operating entities would not enter resolution proceedings), would result in greater losses to Group Inc.'s security holders (including holders of our fixed rate, floating rate and indexed debt securities), than the losses that would result from the application of a bankruptcy proceeding or a different resolution strategy, such as a multiple point of entry resolution strategy for Group Inc. and certain of its material subsidiaries.

Assuming Group Inc. entered resolution proceedings and that support from Group Inc. to its subsidiaries was sufficient to enable the subsidiaries to remain solvent, losses at the subsidiary level would be transferred to Group Inc. and ultimately borne by Group Inc.'s security holders, third-party creditors of Group Inc.'s subsidiaries would receive full recoveries on their claims, and Group Inc.'s security holders (including our shareholders, debtholders and other unsecured creditors) could face significant and possibly complete losses. In that case, Group Inc.'s security holders would face losses while the third-party creditors of Group Inc.'s subsidiaries would incur no losses because the subsidiaries would continue to operate and would not enter resolution or bankruptcy proceedings. In addition, holders of Group Inc.'s eligible long-term debt and holders of Group Inc.'s other debt securities could face losses ahead of its other similarly situated creditors in a resolution under OLA if the FDIC exercised its right, described above, to disregard the priority of creditor claims.

OLA also provides the FDIC with authority to cause creditors and shareholders of the financial company (such as Group Inc.) in receivership to bear losses before taxpayers are exposed to such losses, and amounts owed to the U.S. government would generally receive a statutory payment priority over the claims of private creditors, including senior creditors.

In addition, under OLA, claims of creditors (including debtholders) could be satisfied through the issuance of equity or other securities in a bridge entity to which Group Inc.'s assets are transferred. If such a securities-for-claims exchange were implemented, there can be no assurance that the value of the securities of the bridge entity would be sufficient to repay or satisfy all or any part of the creditor claims for which the securities were exchanged. While the FDIC has issued regulations to implement OLA, not all aspects of how the FDIC might exercise this authority are known and additional rulemaking is possible.

In addition, certain jurisdictions, including the U.K. and the E.U., have implemented, or are considering, changes to resolution regimes to provide resolution authorities with the ability to recapitalize a failing entity by writing down its unsecured debt or converting its unsecured debt into equity. Such "bail-in" powers are intended to enable the recapitalization of a failing institution by allocating losses to its shareholders and unsecured debtholders. If the intercompany funding we provide to our subsidiaries is "bailed in," Group Inc.'s claims on its subsidiaries would be subordinated to the claims of the subsidiaries' third-party creditors or written down. U.S. regulators are considering and non-U.S. authorities have adopted requirements that certain subsidiaries of large financial institutions maintain minimum amounts of total loss-absorbing capacity that would pass losses up from the subsidiaries to the top-tier BHC and, ultimately, to security holders of the top-tier BHC in the event of failure.

The application of Group Inc.'s proposed resolution strategy could result in greater losses for Group Inc.'s security holders.

In our resolution plan, Group Inc. would be resolved under the U.S. Bankruptcy Code. The strategy described in our resolution plan is a variant of the single point of entry strategy: Group Inc. and Goldman Sachs Funding LLC (Funding IHC), a wholly-owned, direct subsidiary of Group Inc., would recapitalize and provide liquidity to certain major subsidiaries, including through the forgiveness of intercompany indebtedness, the extension of the maturities of intercompany indebtedness and the extension of additional intercompany loans. If this strategy were successful, creditors of some or all of Group Inc.'s major subsidiaries would receive full recoveries on their claims, while Group Inc.'s security holders could face significant and possibly complete losses.

To facilitate the execution of our resolution plan, we formed Funding IHC. In exchange for an unsecured subordinated funding note and equity interest, Group Inc. transferred certain intercompany receivables and substantially all of its global core liquid assets (GCLA) to Funding IHC, and agreed to transfer additional GCLA above prescribed thresholds.

We also put in place a Capital and Liquidity Support Agreement (CLSA) among Group Inc., Funding IHC and our major subsidiaries. Under the CLSA, Funding IHC has provided Group Inc. with a committed line of credit that allows Group Inc. to draw sufficient funds to meet its cash needs during the ordinary course of business. In addition, if our financial resources deteriorate so severely that resolution may be imminent, (i) the committed line of credit will automatically terminate and the unsecured subordinated funding note will automatically be forgiven, (ii) all intercompany receivables owed by the major subsidiaries to Group Inc. will be transferred to Funding IHC or their maturities will be extended to five years, (iii) Group Inc. will be obligated to transfer substantially all of its remaining intercompany receivables and GCLA (other than an amount to fund anticipated bankruptcy expenses) to Funding IHC, and (iv) Funding IHC will be obligated to provide capital and liquidity support to the major subsidiaries. Group Inc.'s and Funding IHC's obligations under the CLSA are secured pursuant to a related security agreement. Such actions would materially and adversely affect Group Inc.'s liquidity. As a result, during a period of severe stress, Group Inc. might commence bankruptcy proceedings at an earlier time than it otherwise would if the CLSA and related security agreement had not been implemented.

If Group Inc.'s proposed resolution strategy were successful, Group Inc.'s security holders could face losses while the third-party creditors of Group Inc.'s major subsidiaries would incur no losses because those subsidiaries would continue to operate and not enter resolution or bankruptcy proceedings. As part of the strategy, Group Inc. could also seek to elevate the priority of its guarantee obligations relating to its major subsidiaries' derivative contracts or transfer them to another entity so that cross-default and early termination rights would be stayed under the ISDA Universal Protocol or U.S. ISDA Protocol (ISDA Protocols), as applicable, which would result in holders of Group Inc.'s eligible long-term debt and holders of Group Inc.'s other debt securities incurring losses ahead of the beneficiaries of those guarantee obligations. It is also possible that holders of Group Inc.'s eligible long-term debt and other debt securities could incur losses ahead of other similarly situated creditors.

If Group Inc.'s proposed resolution strategy were not successful, Group Inc.'s financial condition would be adversely impacted and Group Inc.'s security holders, including debtholders, may as a consequence be in a worse position than if the strategy had not been implemented. In all cases, any payments to debtholders are dependent on our ability to make such payments and are therefore subject to our credit risk.

As a result of our recovery and resolution planning processes, including incorporating feedback from our regulators, we may incur increased operational, funding or other costs and face limitations on our ability to structure our internal organization or engage in internal or external activities in a manner that we may otherwise deem most operationally efficient.

Our businesses, profitability and liquidity may be adversely affected by Brexit.

In March 2017, the U.K. notified the European Council of its decision to leave the E.U. (Brexit). As discussed in "Business — Regulation" in Part I, Item 1 of this Form 10-K there is considerable uncertainty as to the regulatory framework that will govern transactions and business undertaken by our U.K. subsidiaries in the E.U., both in the near term and the long term. As a result, we face numerous risks that could adversely affect how we conduct our businesses or our profitability and liquidity.

Our principal E.U. operating subsidiaries, GSI, GSIB and GSAMI, are incorporated and headquartered in the U.K. They all currently benefit from non-discriminatory access to E.U. clients and infrastructure based on E.U. treaties and E.U. legislation, including arrangements for cross-border "passporting" and the establishment of E.U. branches. Because the Withdrawal Agreement has not been ratified by the U.K. and E.U. Parliaments, it is uncertain whether GSI, GSIB and GSAMI will continue to benefit from the existing access arrangements for financial services following March 29, 2019, the date on which the U.K. is scheduled to leave the E.U. Further, even if the Withdrawal Agreement is ratified, there is uncertainty regarding the terms of the long-term trading relationship between the E.U. and the U.K., including the terms of access to each other's financial markets.

In a hard Brexit scenario or as otherwise necessary, our German bank subsidiary, GSBE, will act as our main operating subsidiary in the E.U. and will assume certain functions that can no longer be efficiently and effectively performed by our U.K. operating subsidiaries, including GSI, GSIB and GSAMI. Implementing this strategy could materially adversely affect the manner in which we operate certain businesses in Europe, require us to restructure certain of our operations and expose us to higher operational, regulatory and compliance costs, higher taxes, higher subsidiary-level capital and liquidity requirements, additional restrictions on intercompany transactions, and new restrictions on the ability of our subsidiaries to share personal data, including client data, all of which could adversely affect our liquidity and profitability.

GSBE has not been one of our main operating subsidiaries in the E.U. Depending on the outcome, Brexit could necessitate a rapid and significant expansion in the scope of GSBE's activities, as well as its headcount, balance sheet, and capital and funding needs. Although we have invested significant resources to plan for and address Brexit, there can be no assurance that we will be able to successfully execute our strategy. In addition, even if we are able to successfully execute our strategy, we face the risk that Brexit could have a disproportionately adverse effect on our E.U operations compared to some of our competitors who have more extensive pre-existing operations in the E.U. outside of the U.K.

In addition, Brexit has created an uncertain political and economic environment in the U.K., and may create such environments in other E.U. member states. Political and economic uncertainty has in the past led to, and the outcome of Brexit could lead to, declines in market liquidity and activity levels, volatile market conditions, a contraction of available credit, changes in interest rates or exchange rates, weaker economic growth and reduced business confidence all of which could adversely impact our business.

Our businesses, profitability and liquidity may be adversely affected by deterioration in the credit quality of, or defaults by, third parties who owe us money, securities or other assets or whose securities or obligations we hold.

We are exposed to the risk that third parties that owe us money, securities or other assets will not perform their obligations. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. A failure of a significant market participant, or even concerns about a default by such an institution, could lead to significant liquidity problems, losses or defaults by other institutions, which in turn could adversely affect us.

We are also subject to the risk that our rights against third parties may not be enforceable in all circumstances. In addition, deterioration in the credit quality of third parties whose securities or obligations we hold, including a deterioration in the value of collateral posted by third parties to secure their obligations to us under derivative contracts and loan agreements, could result in losses and/or adversely affect our ability to rehypothecate or otherwise use those securities or obligations for liquidity purposes.

A significant downgrade in the credit ratings of our counterparties could also have a negative impact on our results. While in many cases we are permitted to require additional collateral from counterparties that experience financial difficulty, disputes may arise as to the amount of collateral we are entitled to receive and the value of pledged assets. The termination of contracts and the foreclosure on collateral may subject us to claims for the improper exercise of our rights. Default rates, downgrades and disputes with counterparties as to the valuation of collateral increase significantly in times of market stress, increased volatility and illiquidity.

As part of our clearing and prime brokerage activities, we finance our clients' positions, and we could be held responsible for the defaults or misconduct of our clients. Although we regularly review credit exposures to specific clients and counterparties and to specific industries, countries and regions that we believe may present credit concerns, default risk may arise from events or circumstances that are difficult to detect or foresee.

Concentration of risk increases the potential for significant losses in our market-making, underwriting, investing and lending activities.

Concentration of risk increases the potential for significant losses in our market-making, underwriting, investing and lending activities. The number and size of such transactions may affect our results of operations in a given period. Moreover, because of concentration of risk, we may suffer losses even when economic and market conditions are generally favorable for our competitors. Disruptions in the credit markets can make it difficult to hedge these credit exposures effectively or economically. In addition, we extend large commitments as part of our credit origination activities.

Rules adopted under the Dodd-Frank Act, and similar rules adopted in other jurisdictions, require issuers of certain asset-backed securities and any person who organizes and initiates certain asset-backed securities transactions to retain economic exposure to the asset, which has affected the cost of and structures used in connection with these securitization activities. Our inability to reduce our credit risk by selling, syndicating or securitizing these positions, including during periods of market stress, could negatively affect our results of operations due to a decrease in the fair value of the positions, including due to the insolvency or bankruptcy of the borrower, as well as the loss of revenues associated with selling such securities or loans.

In the ordinary course of business, we may be subject to a concentration of credit risk to a particular counterparty, borrower, issuer, including sovereign issuers, or geographic area or group of related countries, such as the E.U., and a failure or downgrade of, or default by, such entity could negatively impact our businesses, perhaps materially, and the systems by which we set limits and monitor the level of our credit exposure to individual entities, industries and countries may not function as we have anticipated. Regulatory reform, including the Dodd-Frank Act, has led to increased centralization of trading activity through particular clearing houses, central agents or exchanges, which has significantly increased our concentration of risk with respect to these entities. While our activities expose us to many different industries, counterparties and countries, we routinely execute a high volume of transactions with counterparties engaged in financial services activities, including brokers and dealers, commercial banks, clearing houses, exchanges and investment funds. This has resulted in significant credit concentration with respect to these counterparties.

The financial services industry is both highly competitive and interrelated.

The financial services industry and all of our businesses are intensely competitive, and we expect them to remain so. We compete on the basis of a number of factors, including transaction execution, our products and services, innovation, reputation, creditworthiness and price. There has been substantial consolidation and convergence among companies in the financial services industry. This consolidation and convergence has hastened the globalization of the securities and other financial services markets. As a result, we have had to commit capital to support our international operations and to execute large global transactions. To the extent we expand into new business areas and new geographic regions, we will face competitors with more experience and more established relationships with clients, regulators and industry participants in the relevant market, which could adversely affect our ability to expand.

Governments and regulators have recently adopted regulations, imposed taxes, adopted compensation restrictions or otherwise put forward various proposals that have or may impact our ability to conduct certain of our businesses in a cost-effective manner or at all in certain or all jurisdictions, including proposals relating to restrictions on the type of activities in which financial institutions are permitted to engage. These or other similar rules, many of which do not apply to all our U.S. or non-U.S. competitors, could impact our ability to compete effectively.

Pricing and other competitive pressures in our businesses have continued to increase, particularly in situations where some of our competitors may seek to increase market share by reducing prices. For example, in connection with investment banking and other assignments, in response to competitive pressure we have experienced, we have extended and priced credit at levels that may not always fully compensate us for the risks we take.

The financial services industry is highly interrelated in that a significant volume of transactions occur among a limited number of members of that industry. Many transactions are syndicated to other financial institutions and financial institutions are often counterparties in transactions. This has led to claims by other market participants and regulators that such institutions have colluded in order to manipulate markets or market prices, including allegations that antitrust laws have been violated. While we have extensive procedures and controls that are designed to identify and prevent such activities, allegations of such activities, particularly by regulators, can have a negative reputational impact and can subject us to large fines and settlements, and potentially significant penalties, including treble damages.

We face enhanced risks as new business initiatives lead us to transact with a broader array of clients and counterparties and expose us to new asset classes and new markets.

A number of our recent and planned business initiatives and expansions of existing businesses may bring us into contact, directly or indirectly, with individuals and entities that are not within our traditional client and counterparty base and expose us to new asset classes and new markets. For example, we continue to transact business and invest in new regions, including a wide range of emerging and growth markets. Furthermore, in a number of our businesses, including where we make markets, invest and lend, we directly or indirectly own interests in, or otherwise become affiliated with the ownership and operation of public services, such as airports, toll roads and shipping ports, as well as physical commodities and commodities infrastructure components, both within and outside the U.S.

We have increased and intend to further increase our consumer-oriented deposit-taking and lending activities. To the extent we engage in such activities or similar consumer-oriented activities, we could face additional compliance, legal and regulatory risk, increased reputational risk and increased operational risk due to, among other things, higher transaction volumes and significantly increased retention and transmission of customer and client information. As a result of a recent information security event involving a credit reporting agency, identity fraud may increase and industry practices may change in a manner that makes it more difficult for financial institutions, such as us, to evaluate the creditworthiness of consumers.

New business initiatives expose us to new and enhanced risks, including risks associated with dealing with governmental entities, reputational concerns arising from dealing with less sophisticated clients, counterparties and investors, greater regulatory scrutiny of these activities, increased credit-related, market, sovereign and operational risks, risks arising from accidents or acts of terrorism, and reputational concerns with the manner in which certain assets are being operated or held or in which we interact with these counterparties. Legal, regulatory and reputational risks may also exist in connection with activities and transactions involving new products or markets where there is regulatory uncertainty or where there are different or conflicting regulations depending on the regulator or the jurisdiction involved, particularly where transactions in such products may involve multiple jurisdictions.

In recent years, we have invested, and may continue to invest, more in businesses that we expect will generate a higher level of more consistent revenues. Such investments may not be successful or have returns similar to our other businesses.

Our results may be adversely affected by the composition of our client base.

Our client base is not the same as that of our major competitors. Our businesses may have a higher or lower percentage of clients in certain industries or markets than some or all of our competitors. Therefore, unfavorable industry developments or market conditions affecting certain industries or markets may result in our businesses underperforming relative to similar businesses of a competitor if our businesses have a higher concentration of clients in such industries or markets. For example, our market-making businesses have a higher percentage of clients with actively managed assets than our competitors and such clients have been disproportionately affected during recent periods of low volatility.

Correspondingly, favorable or simply less adverse developments or market conditions involving industries or markets in a business where we have a lower concentration of clients in such industry or market may also result in our underperforming relative to a similar business of a competitor that has a higher concentration of clients in such industry or market. For example, we have a smaller corporate client base in our market-making businesses than many of our peers and therefore such competitors may benefit more from increased activity by corporate clients.

Derivative transactions and delayed settlements may expose us to unexpected risk and potential losses.

We are party to a large number of derivative transactions, including credit derivatives. Many of these derivative instruments are individually negotiated and non-standardized, which can make exiting, transferring or settling positions difficult. Many credit derivatives require that we deliver to the counterparty the underlying security, loan or other obligation in order to receive payment. In a number of cases, we do not hold the underlying security, loan or other obligation and may not be able to obtain the underlying security, loan or other obligation. This could cause us to forfeit the payments due to us under these contracts or result in settlement delays with the attendant credit and operational risk, as well as increased costs to us.

Derivative transactions may also involve the risk that documentation has not been properly executed, that executed agreements may not be enforceable against the counterparty, or that obligations under such agreements may not be able to be "netted" against other obligations with such counterparty. In addition, counterparties may claim that such transactions were not appropriate or authorized.

As a signatory to the ISDA Protocols and being subject to the FRB's and FDIC's rules on QFCs and similar rules in other jurisdictions, we may not be able to exercise remedies against counterparties and, as this new regime has not yet been tested, we may suffer risks or losses that we would not have expected to suffer if we could immediately close out transactions upon a termination event. Various non-U.S. regulators have also proposed regulations contemplated by the ISDA Universal Protocol, and those implementing regulations may result in additional limitations on our ability to exercise remedies against counterparties. The impact of the ISDA Protocols and these rules and regulations will depend on the development of market practices and structures, and they extend to repurchase agreements and other instruments that are not derivative contracts.

Derivative contracts and other transactions, including secondary bank loan purchases and sales, entered into with third parties are not always confirmed by the counterparties or settled on a timely basis. While the transaction remains unconfirmed or during any delay in settlement, we are subject to heightened credit and operational risk and in the event of a default may find it more difficult to enforce our rights.

In addition, as new complex derivative products are created, covering a wider array of underlying credit and other instruments, disputes about the terms of the underlying contracts could arise, which could impair our ability to effectively manage our risk exposures from these products and subject us to increased costs. The provisions of the Dodd-Frank Act requiring central clearing of credit derivatives and other OTC derivatives, or a market shift toward standardized derivatives, could reduce the risk associated with such transactions, but under certain circumstances could also limit our ability to develop derivatives that best suit the needs of our clients and to hedge our own risks, and could adversely affect our profitability and increase our credit exposure to central clearing platforms.

Certain of our businesses, our funding and financial products may be adversely affected by changes in or the discontinuance of Interbank Offered Rates (IBORs), in particular LIBOR.

The FCA, which regulates LIBOR, has announced that it will not compel panel banks to contribute to LIBOR after 2021. It is likely that banks will not continue to provide submissions for the calculation of LIBOR after 2021 and possibly prior to then. Similarly, it is not possible to know whether LIBOR will continue to be viewed as an acceptable market benchmark, what rate or rates may become accepted alternatives to LIBOR, or what the effect of any such changes in views or alternatives may have on the financial markets for LIBOR-linked financial instruments. Similar statements have been made with respect to other IBORs.

Uncertainty regarding IBORs and the taking of discretionary actions or negotiation of fallback provisions could result in pricing volatility, loss of market share in certain products, adverse tax or accounting impacts, compliance, legal and operational costs and risks associated with client disclosures, as well as systems disruption, model disruption and other business continuity issues. In addition, uncertainty relating to IBORs could result in increased capital requirements for the firm given potential low transaction volumes, a lack of liquidity or limited observability for exposures linked to IBORs or any emerging successor rates and operational incidents associated with changes in and the discontinuance of IBORs.

The language in our contracts and financial instruments that define IBORs, in particular LIBOR, have developed over time and may have various events that trigger when a successor rate to the designated rate would be selected. If a trigger is satisfied, contracts and financial instruments may give the calculation agent (which may be us) discretion over the successor rate or benchmark to be selected. As a result, there is considerable uncertainty as to how the financial services industry will address the discontinuance of designated rates in contracts and financial instruments or such designated rates ceasing to be acceptable reference rates. This uncertainty could ultimately result in client disputes and litigation surrounding the proper interpretation of our IBOR-based contracts and financial instruments.

Further, the discontinuation of an IBOR, changes in an IBOR or changes in market acceptance of any IBOR as a reference rate may also adversely affect the yield on loans or securities held by us, amounts paid on securities we have issued, amounts received and paid on derivative instruments we have entered into, the value of such loans, securities or derivative instruments, the trading market for securities, the terms of new loans being made using different or modified reference rates, our ability to effectively use derivative instruments to manage risk, or the availability or cost of our floating-rate funding and our exposure to fluctuations in interest rates.

Certain of our businesses and our funding may be adversely affected by changes in other reference rates, currencies, indexes, baskets or ETFs to which products we offer or funding that we raise are linked.

All of our floating rate funding pays interest by reference to rates, such as LIBOR or Federal Funds. In addition, many of the products that we own or that we offer, such as structured notes, warrants, swaps or security-based swaps, pay interest or determine the principal amount to be paid at maturity or in the event of default by reference to rates or by reference to an index, currency, basket, ETF or other financial metric (the underlier). In the event that the composition of the underlier is significantly changed, by reference to rules governing such underlier or otherwise, the underlier ceases to exist (for example, in the event that a country withdraws from the Euro or links its currency to or delinks its currency from another currency or benchmark, or an index or ETF sponsor materially alters the composition of an index or ETF) or the underlier ceases to be recognized as an acceptable market benchmark, we may experience adverse effects consistent with those described above for IBORs.

Our businesses may be adversely affected if we are unable to hire and retain qualified employees.

Our performance is largely dependent on the talents and efforts of highly skilled people; therefore, our continued ability to compete effectively in our businesses, to manage our businesses effectively and to expand into new businesses and geographic areas depends on our ability to attract new talented and diverse employees and to retain and motivate our existing employees. Factors that affect our ability to attract and retain such employees include the level and composition of our compensation and benefits, and our reputation as a successful business with a culture of fairly hiring, training and promoting qualified employees. As a significant portion of the compensation that we pay to our employees is in the form of year-end discretionary compensation, a significant portion of which is in the form of deferred equity-related awards, declines in our profitability, or in the outlook for our future profitability, as well as regulatory limitations on compensation levels and terms, can negatively impact our ability to hire and retain highly qualified employees.

Competition from within the financial services industry and from businesses outside the financial services industry, including the technology industry, for qualified employees has often been intense. Recently, we have experienced increased competition in hiring and retaining employees to address the demands of new regulatory requirements, expanding consumer-oriented businesses and our technology initiatives. This is also the case in emerging and growth markets, where we are often competing for qualified employees with entities that have a significantly greater presence or more extensive experience in the region.

Changes in law or regulation in jurisdictions in which our operations are located that affect taxes on our employees' income, or the amount or composition of compensation, may also adversely affect our ability to hire and retain qualified employees in those jurisdictions.

As described further in "Business — Regulation — Compensation Practices" in Part I, Item 1 of this Form 10-K, our compensation practices are subject to review by, and the standards of, the FRB. As a large global financial and banking institution, we are subject to limitations on compensation practices (which may or may not affect our competitors) by the FRB, the PRA, the FCA, the FDIC and other regulators worldwide. These limitations, including any imposed by or as a result of future legislation or regulation, may require us to alter our compensation practices in ways that could adversely affect our ability to attract and retain talented employees.

We may be adversely affected by increased governmental and regulatory scrutiny or negative publicity.

Governmental scrutiny from regulators, legislative bodies and law enforcement agencies with respect to matters relating to compensation, our business practices, our past actions and other matters has increased dramatically in the past several years. The financial crisis and the current political and public sentiment regarding financial institutions has resulted in a significant amount of adverse press coverage, as well as adverse statements or charges by regulators or other government officials. Press coverage and other public statements that assert some form of wrongdoing (including, in some cases, press coverage and public statements that do not directly involve us) often result in some type of investigation by regulators, legislators and law enforcement officials or in lawsuits.

Responding to these investigations and lawsuits, regardless of the ultimate outcome of the proceeding, is time-consuming and expensive and can divert the time and effort of our senior management from our business. Penalties and fines sought by regulatory authorities have increased substantially over the last several years, and certain regulators have been more likely in recent years to commence enforcement actions or to advance or support legislation targeted at the financial services industry. Adverse publicity, governmental scrutiny and legal and enforcement proceedings can also have a negative impact on our reputation and on the morale and performance of our employees, which could adversely affect our businesses and results of operations.

Substantial civil or criminal liability or significant regulatory action against us could have material adverse financial effects or cause us significant reputational harm, which in turn could seriously harm our business prospects.

We face significant legal risks in our businesses, and the volume of claims and amount of damages and penalties claimed in litigation and regulatory proceedings against financial institutions remain high. See Notes 18 and 27 to the consolidated financial statements in Part II, Item 8 of this Form 10-K for information about certain legal and regulatory proceedings and investigations in which we are involved. Our experience has been that legal claims by customers and clients increase in a market downturn and that employment-related claims increase following periods in which we have reduced our headcount. Additionally, governmental entities have been and are plaintiffs in certain of the legal proceedings in which we are involved, and we may face future civil or criminal actions or claims by the same or other governmental entities, as well as follow-on civil litigation that is often commenced after regulatory settlements.

Significant settlements by several large financial institutions, including, in some cases, us, with governmental entities have been publicly announced. The trend of large settlements with governmental entities may adversely affect the outcomes for other financial institutions in similar actions, especially where governmental officials have announced that the large settlements will be used as the basis or a template for other settlements. The uncertain regulatory enforcement environment makes it difficult to estimate probable losses, which can lead to substantial disparities between legal reserves and subsequent actual settlements or penalties.

Recently, claims of collusion or anti-competitive conduct have become more common. Civil cases have been brought against financial institutions (including us) alleging bid rigging, group boycotts or other anti-competitive practices. Antitrust laws generally provide for joint and several liability and treble damages. These claims have in the past, and may in the future, result in significant settlements.

We are subject to laws and regulations worldwide, including the FCPA and the U.K. Bribery Act, relating to corrupt and illegal payments to, and hiring practices with regard to, government officials and others. Violation of these or similar laws and regulations could result in significant monetary penalties, severe restrictions on our activities and damage to our reputation.

Certain law enforcement authorities have recently required admissions of wrongdoing, and, in some cases, criminal pleas, as part of the resolutions of matters brought by them against financial institutions or their employees. Any such resolution of a criminal matter involving us or our employees could lead to increased exposure to civil litigation, could adversely affect our reputation, could result in penalties or limitations on our ability to conduct our activities generally or in certain circumstances and could have other negative effects.

In addition, the U.S. Department of Justice (DOJ) has announced a policy of requiring companies to provide investigators with all relevant facts relating to the individuals substantially involved in or responsible for the alleged misconduct in order to qualify for any cooperation credit in criminal investigations of corporate wrongdoing, or maximum cooperation credit in civil investigations of corporate wrongdoing. This policy may result in us incurring increased fines and penalties if the DOJ determines that we have not provided sufficient information about applicable individuals in connection with an investigation, as well as increased costs in responding to DOJ investigations. It is possible that other governmental authorities will adopt similar policies.

The growth of electronic trading and the introduction of new trading technology may adversely affect our business and may increase competition.

Technology is fundamental to our business and our industry. The growth of electronic trading and the introduction of new technologies is changing our businesses and presenting us with new challenges. Securities, futures and options transactions are increasingly occurring electronically, both on our own systems and through other alternative trading systems, and it appears that the trend toward alternative trading systems will continue. Some of these alternative trading systems compete with us, particularly our exchange-based market-making activities, and we may experience continued competitive pressures in these and other areas. In addition, the increased use by our clients of low-cost electronic trading systems and direct electronic access to trading markets could cause a reduction in commissions and spreads. As our clients increasingly use our systems to trade directly in the markets, we may incur liabilities as a result of their use of our order routing and execution infrastructure. We have invested significant resources into the development of electronic trading systems and expect to continue to do so, but there is no assurance that the revenues generated by these systems will yield an adequate return on our investment, particularly given the generally lower commissions arising from electronic trades.

Our commodities activities, particularly our physical commodities activities, subject us to extensive regulation and involve certain potential risks, including environmental, reputational and other risks that may expose us to significant liabilities and costs.

As part of our commodities business, we purchase and sell certain physical commodities, arrange for their storage and transport, and engage in market making of commodities. The commodities involved in these activities may include crude oil, refined oil products, natural gas, liquefied natural gas, electric power, agricultural products, metals (base and precious), minerals (including unenriched uranium), emission credits, coal, freight and related products and indices.

In our investing and lending businesses, we make investments in and finance entities that engage in the production, storage and transportation of numerous commodities, including many of the commodities referenced above.

These activities subject us and/or the entities in which we invest to extensive and evolving federal, state and local energy, environmental, antitrust and other governmental laws and regulations worldwide, including environmental laws and regulations relating to, among others, air quality, water quality, waste management, transportation of hazardous substances, natural resources, site remediation and health and safety. Additionally, rising climate change concerns may lead to additional regulation that could increase the operating costs and adversely affect the profitability of certain of our investments.

There may be substantial costs in complying with current or future laws and regulations relating to our commodities-related activities and investments. Compliance with these laws and regulations could require significant commitments of capital toward environmental monitoring, renovation of storage facilities or transport vessels, payment of emission fees and carbon or other taxes, and application for, and holding of, permits and licenses.

Commodities involved in our intermediation activities and investments are also subject to the risk of unforeseen or catastrophic events, which are likely to be outside of our control, including those arising from the breakdown or failure of transport vessels, storage facilities or other equipment or processes or other mechanical malfunctions, fires, leaks, spills or release of hazardous substances, performance below expected levels of output or efficiency, terrorist attacks, extreme weather events or other natural disasters or other hostile or catastrophic events. In addition, we rely on third-party suppliers or service providers to perform their contractual obligations and any failure on their part, including the failure to obtain raw materials at reasonable prices or to safely transport or store commodities, could expose us to costs or losses. Also, while we seek to insure against potential risks, we may not be able to obtain insurance to cover some of these risks and the insurance that we have may be inadequate to cover our losses.

The occurrence of any of such events may prevent us from performing under our agreements with clients, may impair our operations or financial results and may result in litigation, regulatory action, negative publicity or other reputational harm.

We may also be required to divest or discontinue certain of these activities for regulatory or legal reasons. For example, the FRB has proposed regulations that could impose significant additional capital requirements on certain commodity-related activities. If that occurs, we may receive a value that is less than the then carrying value, as we may be unable to exit these activities in an orderly transaction.

In conducting our businesses around the world, we are subject to political, economic, legal, operational and other risks that are inherent in operating in many countries.

In conducting our businesses and maintaining and supporting our global operations, we are subject to risks of possible nationalization, expropriation, price controls, capital controls, exchange controls and other restrictive governmental actions, as well as the outbreak of hostilities or acts of terrorism. For example, sanctions have been imposed by the U.S. and the E.U. on certain individuals and companies in Russia. In many countries, the laws and regulations applicable to the securities and financial services industries and many of the transactions in which we are involved are uncertain and evolving, and it may be difficult for us to determine the exact requirements of local laws in every market. Any determination by local regulators that we have not acted in compliance with the application of local laws in a particular market or our failure to develop effective working relationships with local regulators could have a significant and negative effect not only on our businesses in that market, but also on our reputation generally. Further, in some jurisdictions a failure to comply with laws and regulations may subject us and our personnel not only to civil actions, but also criminal actions. We are also subject to the enhanced risk that transactions we structure might not be legally enforceable in all cases.

Our businesses and operations are increasingly expanding throughout the world, including in emerging and growth markets, and we expect this trend to continue. Various emerging and growth market countries have experienced severe economic and financial disruptions, including significant devaluations of their currencies, defaults or threatened defaults on sovereign debt, capital and currency exchange controls, and low or negative growth rates in their economies, as well as military activity, civil unrest or acts of terrorism. The possible effects of any of these conditions include an adverse impact on our businesses and increased volatility in financial markets generally.

While business and other practices throughout the world differ, our principal entities are subject in their operations worldwide to rules and regulations relating to corrupt and illegal payments, hiring practices and money laundering, as well as laws relating to doing business with certain individuals, groups and countries, such as the FCPA, the USA PATRIOT Act and the U.K. Bribery Act. While we have invested and continue to invest significant resources in training and in compliance monitoring, the geographical diversity of our operations, employees, clients and customers, as well as the vendors and other third parties that we deal with, greatly increases the risk that we may be found in violation of such rules or regulations and any such violation could subject us to significant penalties or adversely affect our reputation.

In addition, there have been a number of highly publicized cases around the world, involving actual or alleged fraud or other misconduct by employees in the financial services industry in recent years, and we run the risk that employee misconduct could occur. This misconduct may include intentional efforts to ignore or circumvent applicable policies, rules or procedures. This misconduct has included and may also include in the future the theft of proprietary information, including proprietary software. It is not always possible to deter or prevent employee misconduct and the precautions we take to prevent and detect this activity have not been and may not be effective in all cases. See for example, "1Malaysia Development Berhad (1MDB)-Related Matters" in Note 27 to the consolidated financial statements in Part II, Item 8 of this Form 10-K.

We may incur losses as a result of unforeseen or catastrophic events, including the emergence of a pandemic, terrorist attacks, extreme weather events or other natural disasters.

The occurrence of unforeseen or catastrophic events, including the emergence of a pandemic, such as the Ebola or Zika viruses, or other widespread health emergency (or concerns over the possibility of such an emergency), terrorist attacks, extreme terrestrial or solar weather events or other natural disasters, could create economic and financial disruptions, and could lead to operational difficulties (including travel limitations) that could impair our ability to manage our businesses.

Item 1B. Unresolved Staff Comments

There are no material unresolved written comments that were received from the SEC staff 180 days or more before the end of our fiscal year relating to our periodic or current reports under the Exchange Act.

Item 2. Properties

Our principal executive offices are located at 200 West Street, New York, New York and consist of approximately 2.1 million square feet. The building is located on a parcel leased from Battery Park City Authority pursuant to a ground lease. Under the lease, Battery Park City Authority holds title to all improvements, including the office building, subject to Goldman Sachs' right of exclusive possession and use until June 2069, the expiration date of the lease. Under the terms of the ground lease, we made a lump sum ground rent payment in June 2007 of $161 million for rent through the term of the lease. We have offices at 30 Hudson Street in Jersey City, New Jersey, which we own and which include approximately 1.6 million square feet of office space. We have additional offices and commercial space in the U.S. and elsewhere in the Americas, which together consist of approximately 2.6 million square feet of leased and owned space.

In Europe, the Middle East and Africa, we have offices that total approximately 1.6 million square feet of leased and owned space. Our European headquarters is located in London at Peterborough Court, pursuant to a lease that we can terminate in 2019. In total, we have offices with approximately 1.2 million square feet in London, relating to various properties. We have substantially completed the construction of a 826,000 square foot office in London. We entered into a sale and leaseback agreement for the property, which closed in January 2019. We expect initial occupancy during 2019.

In Asia, Australia and New Zealand, we have offices with approximately 3.1 million square feet. Our headquarters in this region are in Tokyo, at the Roppongi Hills Mori Tower, and in Hong Kong, at the Cheung Kong Center. In Japan, we currently have offices with approximately 219,000 square feet, the majority of which have leases that will expire in 2023. In Hong Kong, we currently have offices with approximately 300,000 square feet, the majority of which will expire in 2026.

In the preceding paragraphs, square footage figures are provided only for properties that are used in the operation of our businesses.

Our occupancy expenses include costs for office space held in excess of our current requirements. This excess space, the cost of which is charged to earnings as incurred, is being held for potential growth or to replace currently occupied space that we may exit in the future. We regularly evaluate our space capacity in relation to current and projected headcount levels. We may incur exit costs in the future if we (i) reduce our space capacity or (ii) commit to, or occupy, new properties in locations in which we operate and dispose of existing space that had been held for potential growth. These costs may be material to our operating results in a given period.

Item 3. Legal Proceedings

We are involved in a number of judicial, regulatory and arbitration proceedings concerning matters arising in connection with the conduct of our businesses. Many of these proceedings are in early stages, and many of these cases seek an indeterminate amount of damages. However, we believe, based on currently available information, that the results of such proceedings, in the aggregate, will not have a material adverse effect on our financial condition, but may be material to our operating results in a given period. Given the range of litigation and investigations presently under way, our litigation expenses can be expected to remain high. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Use of Estimates" in Part II, Item 7 of this Form 10-K. See Notes 18 and 27 to the consolidated financial statements in Part II, Item 8 of this Form 10-K for information about certain judicial, regulatory and legal proceedings.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The principal market on which our common stock is traded is the NYSE under the symbol "GS." Information relating to the performance of our common stock from December 31, 2013 through December 31, 2018 is set forth in "Supplemental Financial Information — Common Stock Performance" in Part II, Item 8 of this Form 10-K. As of February 8, 2019, there were 7,137 holders of record of our common stock.

The declaration of dividends by Group Inc. is subject to the discretion of the Board of Directors of Group Inc. (Board). Our Board will take into account such matters as general business conditions, our financial results, capital requirements, contractual, legal and regulatory restrictions on the payment of dividends by us to our shareholders or by our subsidiaries to us, the effect on our debt ratings and such other factors as our Board may deem relevant. The holders of our common stock share proportionately on a per share basis in all dividends and other distributions on common stock declared by our Board.

The table below presents purchases made by or on behalf of Group Inc. or any "affiliated purchaser" (as defined in Rule 10b-18(a)(3) under the Exchange Act) of our common stock during the fourth quarter of 2018.

	Total Shares Purchased	Average Price Paid Per Share	Total Shares Purchased as Part of a Publicly Announced Program	Maximum Shares That May Yet Be Purchased Under the Program
2018				
October	**3,440,242**	**$219.52**	**3,440,242**	**35,862,341**
November	**2,182,707**	**$226.69**	**2,182,707**	**33,679,634**
December	**100**	**$178.34**	**100**	**33,679,534**
Total	**5,623,049**		**5,623,049**	

Since March 2000, our Board has approved a repurchase program authorizing repurchases of up to 555 million shares of our common stock. The repurchase program is effected primarily through regular open-market purchases (which may include repurchase plans designed to comply with Rule 10b5-1), the amounts and timing of which are determined primarily by our current and projected capital position, but which may also be influenced by general market conditions and the prevailing price and trading volumes of our common stock. The repurchase program has no set expiration or termination date. Prior to repurchasing common stock, we must receive confirmation that the FRB does not object to such capital action.

Information relating to compensation plans under which our equity securities are authorized for issuance is presented in Part III, Item 12 of this Form 10-K.

Item 6. Selected Financial Data

The Selected Financial Data table is set forth in Part II, Item 8 of this Form 10-K.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Introduction

The Goldman Sachs Group, Inc. (Group Inc. or parent company), a Delaware corporation, together with its consolidated subsidiaries, is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals. Founded in 1869, we are headquartered in New York and maintain offices in all major financial centers around the world.

When we use the terms "we," "us" and "our," we mean Group Inc. and its consolidated subsidiaries. We report our activities in four business segments: Investment Banking, Institutional Client Services, Investing & Lending and Investment Management. See "Results of Operations" for further information about our business segments.

References to "this Form 10-K" are to our Annual Report on Form 10-K for the year ended December 31, 2018. All references to "the consolidated financial statements" or "Supplemental Financial Information" are to Part II, Item 8 of this Form 10-K. All references to 2018, 2017 and 2016 refer to our years ended, or the dates, as the context requires, December 31, 2018, December 31, 2017 and December 31, 2016, respectively. Any reference to a future year refers to a year ending on December 31 of that year. Certain reclassifications have been made to previously reported amounts to conform to the current presentation.

In this discussion and analysis of our financial condition and results of operations, we have included information that may constitute "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are not historical facts, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside our control.

These statements include statements other than historical information or statements of current conditions and may relate to our future plans and objectives and results, among other things, and may also include statements about the effect of changes to the capital, leverage, liquidity, long-term debt and total loss-absorbing capacity (TLAC) rules applicable to banks and bank holding companies (BHCs), the impact of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) on our businesses and operations, and various legal proceedings, governmental investigations or mortgage-related contingencies as set forth in both Notes 27 and 18 to the consolidated financial statements in Part II, Item 8 of this Form 10-K, as well as statements about the results of our Dodd-Frank Act and our stress tests, statements about the objectives and effectiveness of our business continuity plan, information security program, risk management and liquidity policies, statements about our resolution plan and resolution strategy and their implications for our debtholders and other stakeholders, statements about the design and effectiveness of our resolution capital and liquidity models and our triggers and alerts framework, statements about trends in or growth opportunities for our businesses, statements about our future status, activities or reporting under U.S. or non-U.S. banking and financial regulation, statements about our investment banking transaction backlog, statements about our expected tax rate, statements about the estimated impact of new accounting standards, statements about the level of capital actions, statements about our expected interest income, statements about our credit exposures, statements about our preparations following the U.K.'s notification to the European Council of its decision to leave the E.U. (Brexit), including our plan to manage a hard Brexit scenario, statements about the replacement of LIBOR and other IBORs and the objectives of our program related to the transition from IBORs to alternative risk-free reference rates, and statements about the adequacy of our allowance for credit losses.

By identifying these statements for you in this manner, we are alerting you to the possibility that our actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Important factors that could cause our actual results and financial condition to differ from those indicated in these forward-looking statements include, among others, those described in "Risk Factors" in Part I, Item 1A of this Form 10-K and "Cautionary Statement Pursuant to the U.S. Private Securities Litigation Reform Act of 1995" in Part I, Item 1 of this Form 10-K.

Executive Overview

2018 versus 2017. We generated net earnings of $10.46 billion for 2018, significantly higher compared with $4.29 billion for 2017. Diluted earnings per common share was $25.27 for 2018, significantly higher compared with $9.01 for 2017. Return on average common shareholders' equity (ROE) was 13.3% for 2018, compared with 4.9% for 2017. Book value per common share was $207.36 as of December 2018, 14.6% higher compared with December 2017.

In 2018, we recorded a $487 million income tax benefit as we finalized the estimated income tax expense of $4.40 billion related to the Tax Cuts and Jobs Act (Tax Legislation) recorded in the fourth quarter of 2017. Excluding these items, diluted earnings per common share was $24.02 for 2018, compared with $19.76 for 2017, and ROE was 12.7% for 2018, compared with 10.8% for 2017. See "Results of Operations — Financial Overview" for further information about non-GAAP measures that exclude the impact of Tax Legislation. See "Results of Operations — Provision for Taxes" for further information about Tax Legislation.

Net revenues were $36.62 billion for 2018, 12% higher than 2017, reflecting higher net revenues across all segments. Net revenues in Institutional Client Services were higher, due to higher net revenues in both Equities and Fixed Income, Currency and Commodities Client Execution (FICC Client Execution). Net revenues in Investing & Lending increased, driven by significantly higher net interest income in debt securities and loans. Net revenues were also higher in Investment Management, primarily due to significantly higher incentive fees, and Investment Banking, reflecting strong net revenues in both Financial Advisory and Underwriting during 2018.

Provision for credit losses was $674 million for 2018, compared with $657 million for 2017, as the higher provision for credit losses primarily related to consumer loan growth in 2018 was partially offset by an impairment of approximately $130 million on a secured loan in 2017.

Operating expenses were $23.46 billion for 2018, 12% higher than 2017, primarily due to higher compensation and benefits expenses, reflecting improved operating performance, and significantly higher net provisions for litigation and regulatory proceedings.

We returned $4.52 billion of capital to common shareholders during 2018, including $3.29 billion of common share repurchases and $1.23 billion in common stock dividends. As of December 2018, our Common Equity Tier 1 (CET1) ratio as calculated in accordance with the Standardized approach was 13.3% and the Basel III Advanced approach was 13.1%. See Note 20 to the consolidated financial statements for further information about our capital ratios.

2017 versus 2016. We generated net earnings of $4.29 billion for 2017, a decrease of 42%, compared with $7.40 billion in 2016. Diluted earnings per common share was $9.01 for 2017, a decrease of 45%, compared with $16.29 for 2016. ROE was 4.9% for 2017, compared with 9.4% for 2016. Book value per common share was $181.00 as of December 2017, 0.8% lower compared with December 2016.

Net revenues were $32.73 billion for 2017, 6% higher than 2016, due to significantly higher net revenues in Investing & Lending and higher net revenues in both Investment Banking and Investment Management. These increases were partially offset by lower net revenues in Institutional Client Services, primarily reflecting significantly lower net revenues in FICC Client Execution.

Provision for credit losses was $657 million for 2017, compared with $182 million for 2016, reflecting an increase in impairments, which included an impairment of approximately $130 million on a secured loan in 2017, and higher provision for credit losses primarily related to consumer loan growth.

Operating expenses were $20.94 billion for 2017, 3% higher than 2016, primarily driven by slightly higher compensation and benefits expenses and our investments to fund growth.

We returned $7.90 billion of capital to common shareholders during 2017, including $6.72 billion of common share repurchases and $1.18 billion in common stock dividends. As of December 2017, our CET1 ratio as calculated in accordance with the Standardized approach was 12.1% and the Basel III Advanced approach was 10.9%, in each case reflecting the applicable transitional provisions. See Note 20 to the consolidated financial statements for further information about our capital ratios.

Business Environment

Global

During 2018, real gross domestic product (GDP) growth appeared to increase in the U.S. but generally decreased in other major economies. In advanced economies, growth in the Euro area, U.K., and Japan each was lower and, in emerging markets, growth in China decreased slightly. Economic activity in several major emerging market economies was impacted by concerns about the vulnerability of these economies to a stronger U.S. dollar and higher U.S. Treasury rates. Global asset markets experienced significant periods of volatility in the first and fourth quarters of 2018 driven by concerns about the prospect of slowing global growth and tighter monetary policy. The U.S. presidential administration implemented and proposed new tariffs on imports from China, which prompted retaliatory measures, and rising global trade tensions remained a meaningful source of uncertainty affecting asset prices throughout 2018. Political uncertainty in Europe increased as a new coalition government formed in Italy in May 2018 and the future of the relationship between the U.K. and E.U. remained uncertain. During 2018, the U.S. Federal Reserve increased the target federal funds rate four times and the Bank of England increased its official target interest rate in August 2018, while the Bank of Japan introduced forward guidance and expanded the permissible range of fluctuations for the 10-year interest rate.

In investment banking, industry-wide announced and completed mergers and acquisitions volumes increased compared with 2017, while industry-wide underwriting transactions decreased.

United States

In the U.S., real GDP appeared to increase by 2.9% in 2018, compared with 2.2% in 2017, as growth in total fixed investment and government spending increased. Measures of consumer confidence were stronger on average compared with the prior year, and the unemployment rate declined to 3.9% as of December 2018. Housing starts, sales and prices increased compared with 2017. Measures of headline inflation were stable compared with 2017, while measures of core inflation (excluding food and energy) increased. The U.S. Federal Reserve increased the target federal funds rate by 25 basis points in each quarter of 2018 to a range of 2.25% to 2.50% as of December 2018. The yield on the 10-year U.S. Treasury note ended the year at 2.69%, 29 basis points higher compared with the end of 2017. The price of crude oil (WTI) ended the year at approximately $45 per barrel, a decrease of 25% compared with the end of 2017. In equity markets, the Dow Jones Industrial Average decreased by 6%, the S&P 500 Index decreased by 6% and the NASDAQ Composite Index decreased by 4% compared with the end of 2017.

Europe

In the Euro area, real GDP increased by 1.8% in 2018, compared with 2.4% in 2017, while measures of inflation remained low. The European Central Bank maintained its main refinancing operations rate at 0% and its deposit rate at (0.40)%, but reduced its monthly asset purchases to a pace of €15 billion per month after September 2018 and through December 2018, after which net asset purchases ended. Measures of unemployment decreased, and the Euro depreciated by 4% against the U.S. dollar compared with the end of 2017. Following the formation of a new coalition government in May 2018, political uncertainty in Italy remained high and the yield on 10-year government bonds in Italy increased significantly. Elsewhere in the Euro area, yields on 10-year government bonds mostly decreased. In equity markets, the DAX Index decreased by 18%, the Euro Stoxx 50 Index decreased by 14% and the CAC 40 Index decreased by 11% compared with the end of 2017. In March 2018, it was announced that terms were agreed upon for the transitional period of the U.K.'s withdrawal from the E.U. and, in November 2018, the U.K. and the E.U. agreed on a draft Brexit withdrawal agreement. However, as of the end of the year, there was significant uncertainty about the future relationship between the U.K. and the E.U.

In the U.K., real GDP increased by 1.4% in 2018, compared with 1.8% in 2017. The Bank of England increased its official bank rate by 25 basis points to 0.75% in August 2018, and the British pound depreciated by 6% against the U.S. dollar. The yield on 10-year government bonds increased by 8 basis points and, in equity markets, the FTSE 100 Index decreased by 12% compared with the end of 2017.

Asia

In Japan, real GDP increased by 0.7% in 2018, compared with 1.9% in 2017. The Bank of Japan maintained its asset purchase program and continued to target a yield on 10-year government bonds of approximately 0%. In July 2018, the Bank of Japan introduced forward guidance for its interest rate policy and expanded the permissible range of deviations from the 0% target yield for the 10-year government bond. The yield on 10-year government bonds decreased by 3 basis points, the U.S. dollar depreciated by 3% against the Japanese yen and the Nikkei 225 Index decreased by 12% compared with the end of 2017.

In China, real GDP increased by 6.6% in 2018, compared with 6.8% in 2017. The U.S. dollar appreciated by 6% against the Chinese yuan compared with the end of 2017, while in equity markets, the Shanghai Composite Index decreased by 25% and the Hang Seng Index decreased by 14%.

In India, real GDP appeared to increase by 7.5% in 2018, compared with 6.3% in 2017. The U.S. dollar appreciated by 9% against the Indian rupee and the BSE Sensex Index increased by 6% compared with the end of 2017.

Other Markets

In Brazil, real GDP appeared to increase by 1.2% in 2018, compared with 1.1% in 2017. The U.S. dollar appreciated by 17% against the Brazilian real and the Bovespa Index increased by 15% compared with the end of 2017. In Russia, real GDP appeared to increase by 2.3% in 2018, compared with 1.5% in 2017. The U.S. dollar appreciated by 21% against the Russian ruble and the MOEX Russia Index increased by 12% compared with the end of 2017.

Critical Accounting Policies

Fair Value

Fair Value Hierarchy. Financial instruments owned and financial instruments sold, but not yet purchased (i.e., inventory), and certain other financial assets and financial liabilities, are included in our consolidated statements of financial condition at fair value (i.e., marked-to-market), with related gains or losses generally recognized in our consolidated statements of earnings. The use of fair value to measure financial instruments is fundamental to our risk management practices and is our most critical accounting policy.

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We measure certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks). In determining fair value, the hierarchy under U.S. generally accepted accounting principles (U.S. GAAP) gives (i) the highest priority to unadjusted quoted prices in active markets for identical, unrestricted assets or liabilities (level 1 inputs), (ii) the next priority to inputs other than level 1 inputs that are observable, either directly or indirectly (level 2 inputs), and (iii) the lowest priority to inputs that cannot be observed in market activity (level 3 inputs). In evaluating the significance of a valuation input, we consider, among other factors, a portfolio's net risk exposure to that input. Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to their fair value measurement.

The fair values for substantially all of our financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and our credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads.

Instruments classified in level 3 of the fair value hierarchy are those which require one or more significant inputs that are not observable. Level 3 financial assets represented 2.4% as of December 2018 and 2.1% as of December 2017, of our total assets. See Notes 5 through 8 to the consolidated financial statements for further information about level 3 financial assets, including changes in level 3 financial assets and related fair value measurements. Absent evidence to the contrary, instruments classified in level 3 of the fair value hierarchy are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequent to the transaction date, we use other methodologies to determine fair value, which vary based on the type of instrument. Estimating the fair value of level 3 financial instruments requires judgments to be made. These judgments include:

- Determining the appropriate valuation methodology and/or model for each type of level 3 financial instrument;
- Determining model inputs based on an evaluation of all relevant empirical market data, including prices evidenced by market transactions, interest rates, credit spreads, volatilities and correlations; and
- Determining appropriate valuation adjustments, including those related to illiquidity or counterparty credit quality.

Regardless of the methodology, valuation inputs and assumptions are only changed when corroborated by substantive evidence.

Controls Over Valuation of Financial Instruments. Market makers and investment professionals in our revenue-producing units are responsible for pricing our financial instruments. Our control infrastructure is independent of the revenue-producing units and is fundamental to ensuring that all of our financial instruments are appropriately valued at market-clearing levels. In the event that there is a difference of opinion in situations where estimating the fair value of financial instruments requires judgment (e.g., calibration to market comparables or trade comparison, as described below), the final valuation decision is made by senior managers in independent risk oversight and control functions. This independent price verification is critical to ensuring that our financial instruments are properly valued.

Price Verification. All financial instruments at fair value classified in levels 1, 2 and 3 of the fair value hierarchy are subject to our independent price verification process. The objective of price verification is to have an informed and independent opinion with regard to the valuation of financial instruments under review. Instruments that have one or more significant inputs which cannot be corroborated by external market data are classified in level 3 of the fair value hierarchy. Price verification strategies utilized by our independent risk oversight and control functions include:

- **Trade Comparison.** Analysis of trade data (both internal and external, where available) is used to determine the most relevant pricing inputs and valuations.
- **External Price Comparison.** Valuations and prices are compared to pricing data obtained from third parties (e.g., brokers or dealers, Markit, Bloomberg, IDC, TRACE). Data obtained from various sources is compared to ensure consistency and validity. When broker or dealer quotations or third-party pricing vendors are used for valuation or price verification, greater priority is generally given to executable quotations.
- **Calibration to Market Comparables.** Market-based transactions are used to corroborate the valuation of positions with similar characteristics, risks and components.
- **Relative Value Analyses.** Market-based transactions are analyzed to determine the similarity, measured in terms of risk, liquidity and return, of one instrument relative to another or, for a given instrument, of one maturity relative to another.
- **Collateral Analyses.** Margin calls on derivatives are analyzed to determine implied values, which are used to corroborate our valuations.
- **Execution of Trades.** Where appropriate, trading desks are instructed to execute trades in order to provide evidence of market-clearing levels.
- **Backtesting.** Valuations are corroborated by comparison to values realized upon sales.

See Notes 5 through 8 to the consolidated financial statements for further information about fair value measurements.

Review of Net Revenues. Independent risk oversight and control functions ensure adherence to our pricing policy through a combination of daily procedures, including the explanation and attribution of net revenues based on the underlying factors. Through this process, we independently validate net revenues, identify and resolve potential fair value or trade booking issues on a timely basis and seek to ensure that risks are being properly categorized and quantified.

Review of Valuation Models. Our independent model risk management group (Model Risk Management), consisting of quantitative professionals who are separate from model developers, performs an independent model review and validation process of our valuation models. New or changed models are reviewed and approved prior to being put into use. Models are evaluated and re-approved annually to assess the impact of any changes in the product or market and any market developments in pricing theories. See "Risk Management — Model Risk Management" for further information about the review and validation of our valuation models.

Goodwill and Identifiable Intangible Assets

Goodwill. Goodwill is the cost of acquired companies in excess of the fair value of net assets, including identifiable intangible assets, at the acquisition date.

Goodwill is assessed for impairment annually in the fourth quarter or more frequently if events occur or circumstances change that indicate an impairment may exist. When assessing goodwill for impairment, first, qualitative factors are assessed to determine whether it is more likely than not that the estimated fair value of a reporting unit is less than its estimated carrying value. If the results of the qualitative assessment are not conclusive, a quantitative goodwill test is performed by comparing the estimated fair value of each reporting unit with its estimated carrying value.

In the fourth quarter of 2018, we assessed goodwill for impairment for each of our reporting units by performing a qualitative assessment. The qualitative assessment required management to make judgments and to evaluate several factors, which included, but were not limited to, performance indicators, firm and industry events, macroeconomic indicators and fair value indicators. Based on our evaluation of these factors, we determined that it was more likely than not that the estimated fair value of each of the reporting units exceeded its respective estimated carrying value. Therefore, we determined that goodwill for each reporting unit was not impaired and that a quantitative goodwill test was not required.

See Note 13 to the consolidated financial statements for further information about our goodwill.

Estimating the fair value of our reporting units requires management to make judgments. Critical inputs to the fair value estimates include projected earnings and attributed equity. There is inherent uncertainty in the projected earnings. The estimated net book value of each reporting unit reflects an allocation of total shareholders' equity and represents the estimated amount of total shareholders' equity required to support the activities of the reporting unit under currently applicable regulatory capital requirements. See "Equity Capital Management and Regulatory Capital" for further information about our capital requirements.

If we experience a prolonged or severe period of weakness in the business environment, financial markets, our performance or our common stock price, or additional increases in capital requirements, our goodwill could be impaired in the future.

Identifiable Intangible Assets. We amortize our identifiable intangible assets over their estimated useful lives generally using the straight-line method. Identifiable intangible assets are tested for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable.

A prolonged or severe period of market weakness, or significant changes in regulation, could adversely impact our businesses and impair the value of our identifiable intangible assets. In addition, certain events could indicate a potential impairment of our identifiable intangible assets, including weaker business performance resulting in a decrease in our customer base and decreases in revenues from customer contracts and relationships. Management judgment is required to evaluate whether indications of potential impairment have occurred, and to test intangible assets for impairment, if required.

An impairment, generally calculated as the difference between the estimated fair value and the carrying value of an asset or asset group, is recognized if the total of the estimated undiscounted cash flows relating to the asset or asset group is less than the corresponding carrying value.

See Note 13 to the consolidated financial statements for further information about our identifiable intangible assets.

Recent Accounting Developments

See Note 3 to the consolidated financial statements for information about Recent Accounting Developments.

Use of Estimates

U.S. GAAP requires management to make certain estimates and assumptions. In addition to the estimates we make in connection with fair value measurements and the accounting for goodwill and identifiable intangible assets, the use of estimates and assumptions is also important in determining the allowance for credit losses on loans receivable and lending commitments held for investment, provisions for losses that may arise from litigation and regulatory proceedings (including governmental investigations), and provisions for losses that may arise from tax audits.

We estimate and record an allowance for credit losses related to our loans receivable and lending commitments held for investment. Management's estimate of credit losses entails judgment about collectability at the reporting dates, and there are uncertainties inherent in those judgments. See Note 9 to the consolidated financial statements for further information about the allowance for credit losses.

We also estimate and provide for potential losses that may arise out of litigation and regulatory proceedings to the extent that such losses are probable and can be reasonably estimated. In addition, we estimate the upper end of the range of reasonably possible aggregate loss in excess of the related reserves for litigation and regulatory proceedings where we believe the risk of loss is more than slight. See Notes 18 and 27 to the consolidated financial statements for information about certain judicial, litigation and regulatory proceedings.

Significant judgment is required in making these estimates and our final liabilities may ultimately be materially different. Our total estimated liability in respect of litigation and regulatory proceedings is determined on a case-by-case basis and represents an estimate of probable losses after considering, among other factors, the progress of each case, proceeding or investigation, our experience and the experience of others in similar cases, proceedings or investigations, and the opinions and views of legal counsel.

In accounting for income taxes, we recognize tax positions in the financial statements only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. See Note 24 to the consolidated financial statements for further information about income taxes.

Results of Operations

The composition of our net revenues has varied over time as financial markets and the scope of our operations have changed. The composition of net revenues can also vary over the shorter term due to fluctuations in U.S. and global economic and market conditions. See "Risk Factors" in Part I, Item 1A of this Form 10-K for further information about the impact of economic and market conditions on our results of operations.

Financial Overview

The table below presents an overview of financial results and selected financial ratios.

	Year Ended December		
$ in millions, except per share amounts	**2018**	2017	2016
Net revenues	**$36,616**	$32,730	$30,790
Pre-tax earnings	**$12,481**	$11,132	$10,304
Net earnings	**$10,459**	$ 4,286	$ 7,398
Net earnings applicable to common shareholders	**$ 9,860**	$ 3,685	$ 7,087
Diluted earnings per common share	**$ 25.27**	$ 9.01	$ 16.29
ROE	**13.3%**	4.9%	9.4%
ROTE	**14.1%**	5.2%	9.9%
Net earnings to average total assets	**1.1%**	0.5%	0.8%
Return on average total shareholders' equity	**12.3%**	5.0%	8.5%
Average total shareholders' equity to average total assets	**8.8%**	9.5%	9.8%
Dividend payout ratio	**12.5%**	32.2%	16.0%

In the table above:

- Dividend payout ratio is calculated by dividing dividends declared per common share by diluted earnings per common share.
- Net earnings applicable to common shareholders for 2016 included a benefit of $266 million, reflected in preferred stock dividends, related to the exchange of APEX for shares of Series E and Series F Preferred Stock. See Note 19 to the consolidated financial statements for further information.
- ROE is calculated by dividing net earnings applicable to common shareholders by average monthly common shareholders' equity. Tangible common shareholders' equity is calculated as total shareholders' equity less preferred stock, goodwill and identifiable intangible assets. Return on average tangible common shareholders' equity (ROTE) is calculated by dividing net earnings applicable to common shareholders by average monthly tangible common shareholders' equity. We believe that tangible common shareholders' equity is meaningful because it is a measure that we and investors use to assess capital adequacy and that ROTE is meaningful because it measures the performance of businesses consistently, whether they were acquired or developed internally. Tangible common shareholders' equity and ROTE are non-GAAP measures and may not be comparable to similar non-GAAP measures used by other companies. Return on average total shareholders' equity is calculated by dividing net earnings by average monthly total shareholders' equity. The table below presents average common and total shareholders' equity, including the reconciliation of average total shareholders' equity to average tangible common shareholders' equity.

	Average for the Year Ended December		
$ in millions	**2018**	2017	2016
Total shareholders' equity	**$ 85,238**	$ 85,959	$ 86,658
Preferred stock	**(11,253)**	(11,238)	(11,304)
Common shareholders' equity	**73,985**	74,721	75,354
Goodwill and identifiable intangible assets	**(4,090)**	(4,065)	(4,126)
Tangible common shareholders' equity	**$ 69,895**	$ 70,656	$ 71,228

- In 2017, we recorded $4.40 billion of estimated income tax expense related to Tax Legislation. Excluding this expense, diluted earnings per common share was $19.76, ROE was 10.8% and ROTE was 11.4% for 2017. In the fourth quarter of 2018, we finalized this estimate to reflect the impact of updated information, including subsequent guidance issued by the U.S. Internal Revenue Service (IRS), resulting in a $487 million income tax benefit for 2018. Excluding this benefit, diluted earnings per common share was $24.02, ROE was 12.7% and ROTE was 13.4% for 2018. We believe that presenting our results excluding Tax Legislation is meaningful as excluding the above items increases the comparability of period-to-period results. See "Results of Operations — Provision for Taxes" for further information about Tax Legislation. Diluted earnings per common share, ROE and ROTE, excluding the impact of the above items related to Tax Legislation, are non-GAAP measures and may not be comparable to similar non-GAAP measures used by other companies. The tables below present the calculation of net earnings applicable to common shareholders, diluted earnings per common share and average common shareholders' equity, excluding the impact of the above items related to Tax Legislation.

	Year Ended December	
in millions, except per share amounts	**2018**	2017
Net earnings applicable to common shareholders, as reported	**$9,860**	$3,685
Impact of Tax Legislation	**(487)**	4,400
Net earnings applicable to common shareholders, excluding the impact of Tax Legislation	**$9,373**	$8,085
Divided by average diluted common shares	**390.2**	409.1
Diluted earnings per common share, excluding the impact of Tax Legislation	**$24.02**	$19.76

	Average for the Year Ended December	
$ in millions	**2018**	2017
Common shareholders' equity, as reported	**$73,985**	$74,721
Impact of Tax Legislation	**(42)**	338
Common shareholders' equity, excluding the impact of Tax Legislation	**73,943**	75,059
Goodwill and identifiable intangible assets	**(4,090)**	(4,065)
Tangible common shareholders' equity, excluding the impact of Tax Legislation	**$69,853**	$70,994

- In 2017, as required, we adopted ASU No. 2016-09, "Compensation — Stock Compensation (Topic 718) — Improvements to Employee Share-Based Payment Accounting." The impact of adoption was a reduction to our provision for taxes of $719 million for 2017, which increased diluted earnings per common share by approximately $1.75 and both ROE and ROTE by approximately 1.0 percentage points. The impact for 2018 was not material. See Note 3 to the consolidated financial statements for further information about this ASU.

Net Revenues

The table below presents net revenues by line item.

	Year Ended December		
$ in millions	**2018**	2017	2016
Investment banking	**$ 7,862**	$ 7,371	$ 6,273
Investment management	**6,514**	5,803	5,407
Commissions and fees	**3,199**	3,051	3,208
Market making	**9,451**	7,660	9,933
Other principal transactions	**5,823**	5,913	3,382
Total non-interest revenues	**32,849**	29,798	28,203
Interest income	**19,679**	13,113	9,691
Interest expense	**15,912**	10,181	7,104
Net interest income	**3,767**	2,932	2,587
Total net revenues	**$36,616**	$32,730	$30,790

In the table above:

- Investment banking consists of revenues (excluding net interest) from financial advisory and underwriting assignments, as well as derivative transactions directly related to these assignments. These activities are included in our Investment Banking segment.
- Investment management consists of revenues (excluding net interest) from providing investment management services to a diverse set of clients, as well as wealth advisory services and certain transaction services to high-net-worth individuals and families. These activities are included in our Investment Management segment.
- Commissions and fees consists of revenues from executing and clearing client transactions on major stock, options and futures exchanges worldwide, as well as over-the-counter (OTC) transactions. These activities are included in our Institutional Client Services and Investment Management segments.
- Market making consists of revenues (excluding net interest) from client execution activities related to making markets in interest rate products, credit products, mortgages, currencies, commodities and equity products. These activities are included in our Institutional Client Services segment.
- Other principal transactions consists of revenues (excluding net interest) from our investing activities and the origination of loans to provide financing to clients. In addition, other principal transactions includes revenues related to our consolidated investments. These activities are included in our Investing & Lending segment. Provision for credit losses, previously reported in other principal transactions revenues, is now reported as a separate line item in the consolidated statements of earnings. Previously reported amounts have been conformed to the current presentation.

Operating Environment. During 2018, our market-making activities reflected generally higher levels of volatility and improved client activity, compared with a low volatility environment in 2017. In investment banking, industry-wide mergers and acquisitions volumes increased compared with 2017, while industry-wide underwriting transactions decreased. Our other principal transactions revenues benefited from company-specific events, including sales, and strong corporate performance, while investments in public equities reflected losses, as global equity prices generally decreased in 2018, particularly towards the end of the year. In investment management, our assets under supervision increased reflecting net inflows in liquidity products, fixed income assets and equity assets, partially offset by depreciation in client assets, primarily in equity assets.

If market-making or investment banking activity levels decline, or assets under supervision decline, or asset prices continue to decline, net revenues would likely be negatively impacted. See "Segment Operating Results" for further information about the operating environment and material trends and uncertainties that may impact our results of operations.

During 2017, generally higher asset prices and tighter credit spreads were supportive of industry-wide underwriting activities, investment management performance and other principal transactions. However, low levels of volatility in equity, fixed income, currency and commodity markets continued to negatively affect our market-making activities.

2018 versus 2017

Net revenues in the consolidated statements of earnings were $36.62 billion for 2018, 12% higher than 2017, primarily due to significantly higher market making revenues and net interest income, as well as higher investment management revenues and investment banking revenues.

Non-Interest Revenues. Investment banking revenues in the consolidated statements of earnings were $7.86 billion for 2018, 7% higher than 2017. Revenues in financial advisory were higher, reflecting an increase in industry-wide completed mergers and acquisitions volumes. Revenues in underwriting were slightly higher, due to significantly higher revenues in equity underwriting, driven by initial public offerings, partially offset by lower revenues in debt underwriting, reflecting a decline in leveraged finance activity.

Investment management revenues in the consolidated statements of earnings were $6.51 billion for 2018, 12% higher than 2017, primarily due to significantly higher incentive fees, as a result of harvesting. Management and other fees were also higher, reflecting higher average assets under supervision and the impact of the recently adopted revenue recognition standard, partially offset by shifts in the mix of client assets and strategies. See Note 3 to the consolidated financial statements for further information about ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)."

Commissions and fees in the consolidated statements of earnings were $3.20 billion for 2018, 5% higher than 2017, reflecting an increase in our listed cash equity and futures volumes, generally consistent with market volumes.

Market making revenues in the consolidated statements of earnings were $9.45 billion for 2018, 23% higher than 2017, due to significantly higher revenues in equity products, interest rate products and commodities. These increases were partially offset by significantly lower results in mortgages and lower revenues in credit products.

Other principal transactions revenues in the consolidated statements of earnings were $5.82 billion for 2018, 2% lower than 2017, reflecting net losses from investments in public equities compared with net gains in the prior year, partially offset by significantly higher net gains from investments in private equities, driven by company-specific events, including sales, and corporate performance.

Net Interest Income. Net interest income in the consolidated statements of earnings was $3.77 billion for 2018, 28% higher than 2017, reflecting an increase in interest income primarily due to the impact of higher interest rates on collateralized agreements, other interest-earning assets and deposits with banks, increases in total average loans receivable and financial instruments owned, and higher yields on financial instruments owned and loans receivable. The increase in interest income was partially offset by higher interest expense primarily due to the impact of higher interest rates on other interest-bearing liabilities, collateralized financings, deposits and long-term borrowings, and increases in total average long-term borrowings and deposits. See "Statistical Disclosures — Distribution of Assets, Liabilities and Shareholders' Equity" for further information about our sources of net interest income.

2017 versus 2016

Net revenues in the consolidated statements of earnings were $32.73 billion for 2017, 6% higher than 2016, due to significantly higher other principal transactions revenues, and higher investment banking revenues, investment management revenues and net interest income. These increases were partially offset by significantly lower market making revenues and lower commissions and fees.

Non-Interest Revenues. Investment banking revenues in the consolidated statements of earnings were $7.37 billion for 2017, 18% higher than 2016. Revenues in financial advisory were higher compared with 2016, reflecting an increase in completed mergers and acquisitions transactions. Revenues in underwriting were significantly higher compared with 2016, due to significantly higher revenues in both debt underwriting, primarily reflecting an increase in industry-wide leveraged finance activity, and equity underwriting, reflecting an increase in industry-wide secondary offerings.

Investment management revenues in the consolidated statements of earnings were $5.80 billion for 2017, 7% higher than 2016, due to higher management and other fees, reflecting higher average assets under supervision, and higher transaction revenues.

Commissions and fees in the consolidated statements of earnings were $3.05 billion for 2017, 5% lower than 2016, reflecting a decline in our listed cash equity volumes in the U.S. Market volumes in the U.S. also declined.

Market making revenues in the consolidated statements of earnings were $7.66 billion for 2017, 23% lower than 2016, due to significantly lower revenues in commodities, currencies, credit products, interest rate products and equity derivative products. These results were partially offset by significantly higher revenues in equity cash products and significantly improved results in mortgages.

Other principal transactions revenues in the consolidated statements of earnings were $5.91 billion for 2017, 75% higher than 2016, primarily reflecting a significant increase in net gains from private equities, which were positively impacted by company-specific events and corporate performance. In addition, net gains from public equities were significantly higher, as global equity prices increased during the year.

Net Interest Income. Net interest income in the consolidated statements of earnings was $2.93 billion for 2017, 13% higher than 2016, reflecting an increase in interest income primarily due to the impact of higher interest rates on collateralized agreements, higher interest income from loans receivable due to higher yields and an increase in total average loans receivable, an increase in total average financial instruments owned, and the impact of higher interest rates on other interest-earning assets and deposits with banks. The increase in interest income was partially offset by higher interest expense primarily due to the impact of higher interest rates on other interest-bearing liabilities, an increase in total average long-term borrowings, and the impact of higher interest rates on interest-bearing deposits, short-term borrowings and collateralized financings. See "Statistical Disclosures — Distribution of Assets, Liabilities and Shareholders' Equity" for further information about our sources of net interest income.

Provision for Credit Losses

Provision for credit losses consists of provision for credit losses on loans receivable and lending commitments held for investment. See Note 9 to the consolidated financial statements for further information about the provision for credit losses.

The table below presents the provision for credit losses.

	Year Ended December		
$ in millions	**2018**	2017	2016
Provision for credit losses	**$674**	$657	$182

2018 versus 2017. Provision for credit losses in the consolidated statements of earnings was $674 million for 2018, compared with $657 million for 2017, as the higher provision for credit losses primarily related to consumer loan growth in 2018 was partially offset by an impairment of approximately $130 million on a secured loan in 2017.

2017 versus 2016. Provision for credit losses in the consolidated statements of earnings was $657 million for 2017, compared with $182 million for 2016, reflecting an increase in impairments, which included an impairment of approximately $130 million on a secured loan in 2017, and higher provision for credit losses primarily related to consumer loan growth.

Operating Expenses

Our operating expenses are primarily influenced by compensation, headcount and levels of business activity. Compensation and benefits includes salaries, discretionary compensation, amortization of equity awards and other items such as benefits. Discretionary compensation is significantly impacted by, among other factors, the level of net revenues, overall financial performance, prevailing labor markets, business mix, the structure of our share-based compensation programs and the external environment. In addition, see "Use of Estimates" for further information about expenses that may arise from litigation and regulatory proceedings.

The table below presents operating expenses by line item and headcount.

	Year Ended December		
$ in millions	**2018**	2017	2016
Compensation and benefits	**$12,328**	$11,653	$11,448
Brokerage, clearing, exchange and distribution fees	**3,200**	2,876	2,823
Market development	**740**	588	457
Communications and technology	**1,023**	897	809
Depreciation and amortization	**1,328**	1,152	998
Occupancy	**809**	733	788
Professional fees	**1,214**	1,165	1,081
Other expenses	**2,819**	1,877	1,900
Total operating expenses	**$23,461**	$20,941	$20,304
Headcount at period-end	**36,600**	33,600	32,400

In the table above, the following reclassifications have been made to previously reported amounts to conform to the current presentation:

- Regulatory-related fees that are paid to exchanges are now reported in brokerage, clearing, exchange and distribution fees. Previously such amounts were reported in other expenses.
- Headcount consists of our employees, and excludes consultants and temporary staff previously reported as part of total staff. As a result, expenses related to these consultants and temporary staff are now reported in professional fees. Previously such amounts were reported in compensation and benefits expenses.

2018 versus 2017. Operating expenses in the consolidated statements of earnings were $23.46 billion for 2018, 12% higher than 2017. Our efficiency ratio (total operating expenses divided by total net revenues) for 2018 was 64.1%, compared with 64.0% for 2017.

The increase in operating expenses compared with 2017 was primarily due to higher compensation and benefits expenses, reflecting improved operating performance, and significantly higher net provisions for litigation and regulatory proceedings. Brokerage, clearing, exchange and distribution fees were also higher, reflecting an increase in activity levels, and technology expenses increased, reflecting higher expenses related to computing services. In addition, expenses related to consolidated investments and our digital lending and deposit platform increased, with the increases primarily in depreciation and amortization expenses, market development expenses and other expenses. The increase compared with 2017 also included $297 million related to the recently adopted revenue recognition standard. See Note 3 to the consolidated financial statements for further information about ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)."

Net provisions for litigation and regulatory proceedings for 2018 were $844 million compared with $188 million for 2017. 2018 included a $132 million charitable contribution to Goldman Sachs Gives, our donor-advised fund. Compensation was reduced to fund this charitable contribution to Goldman Sachs Gives. We ask our participating managing directors to make recommendations regarding potential charitable recipients for this contribution.

As of December 2018, headcount increased 9% compared with December 2017, reflecting an increase in technology professionals and investments in new business initiatives.

2017 versus 2016. Operating expenses in the consolidated statements of earnings were $20.94 billion for 2017, 3% higher than 2016. Our efficiency ratio for 2017 was 64.0% compared with 65.9% for 2016.

The increase in operating expenses compared with 2016 was primarily driven by slightly higher compensation and benefits expenses and our investments to fund growth. Higher expenses related to consolidated investments and our digital lending and deposit platform were primarily included in depreciation and amortization expenses, market development expenses and other expenses. In addition, technology expenses increased, reflecting higher expenses related to cloud-based services and software depreciation, and professional fees increased, primarily related to consulting costs. These increases were partially offset by lower net provisions for litigation and regulatory proceedings, and lower occupancy expenses (primarily related to exit costs in 2016).

Net provisions for litigation and regulatory proceedings for 2017 were $188 million compared with $396 million for 2016. 2017 included a $127 million charitable contribution to Goldman Sachs Gives, our donor-advised fund. Compensation was reduced to fund this charitable contribution to Goldman Sachs Gives. We ask our participating managing directors to make recommendations regarding potential charitable recipients for this contribution.

As of December 2017, headcount increased 4% compared with December 2016, reflecting an increase in employees of our digital lending and deposit platform, and in support of our regulatory efforts.

Provision for Taxes

The effective income tax rate for 2018 was 16.2%, down from 61.5% for 2017, as 2017 included the estimated impact of Tax Legislation, which increased our effective income tax rate by 39.5 percentage points. Additionally, the decrease compared with 2017 reflected the impact of the lower U.S. corporate income tax rate in 2018. The estimated impact of Tax Legislation was an increase in income tax expense of $4.40 billion for 2017. During 2018, we finalized this estimate to reflect the impact of updated information, including subsequent guidance issued by the IRS, resulting in a $487 million income tax benefit for 2018.

The effective income tax rate for 2017 was 61.5%, up from 28.2% for 2016. The increase compared with 2016 was primarily due to the estimated impact of Tax Legislation, which was enacted on December 22, 2017, partially offset by tax benefits on the settlement of employee share-based awards in accordance with ASU No. 2016-09.

Effective January 1, 2018, Tax Legislation reduced the U.S. corporate tax rate to 21%, eliminated tax deductions for certain expenses and enacted two new taxes, Base Erosion and Anti-Abuse Tax (BEAT) and Global Intangible Low Taxed Income (GILTI). BEAT is an alternative minimum tax that applies to banks that pay more than 2% of total deductible expenses to certain foreign subsidiaries. GILTI is effectively a 10.5% tax, before allowable credits for foreign taxes paid, on the annual taxable income of certain foreign subsidiaries. Income tax expense associated with GILTI is recognized as incurred. During 2018, the IRS issued proposed regulations relating to BEAT and GILTI. Our 2018 effective income tax rate includes estimates for BEAT and GILTI that are based on our current interpretation of these proposed regulations. We do not expect that the finalization of these proposed regulations will have a material impact on these estimates.

Based on our current interpretations of the rules and legislative guidance to date, we expect our 2019 tax rate to be between 22% and 23%, excluding the impact of equity-based compensation.

Segment Operating Results

The table below presents the net revenues, provision for credit losses, operating expenses and pre-tax earnings by segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
Investment Banking			
Net revenues	**$ 7,862**	$ 7,371	$ 6,273
Operating expenses	**4,346**	3,526	3,437
Pre-tax earnings	**$ 3,516**	$ 3,845	$ 2,836
Institutional Client Services			
Net revenues	**$13,482**	$11,902	$14,467
Operating expenses	**10,351**	9,692	9,713
Pre-tax earnings	**$ 3,131**	$ 2,210	$ 4,754
Investing & Lending			
Net revenues	**$ 8,250**	$ 7,238	$ 4,262
Provision for credit losses	**674**	657	182
Operating expenses	**3,365**	2,796	2,386
Pre-tax earnings	**$ 4,211**	$ 3,785	$ 1,694
Investment Management			
Net revenues	**$ 7,022**	$ 6,219	$ 5,788
Operating expenses	**5,267**	4,800	4,654
Pre-tax earnings	**$ 1,755**	$ 1,419	$ 1,134
Total net revenues	**$36,616**	$32,730	$30,790
Provision for credit losses	**674**	657	182
Total operating expenses	**23,461**	20,941	20,304
Total pre-tax earnings	**$12,481**	$11,132	$10,304

In the table above:

- Provision for credit losses, previously reported in Investing & Lending segment net revenues, is now reported as a separate line item. Previously reported amounts have been conformed to the current presentation.
- All operating expenses have been allocated to our segments except for charitable contributions of $132 million for 2018, $127 million for 2017 and $114 million for 2016.

Net revenues in our segments include allocations of interest income and expense to specific securities, commodities and other positions in relation to the cash generated by, or funding requirements of, such positions. See Note 25 to the consolidated financial statements for further information about our business segments.

Our cost drivers taken as a whole, compensation, headcount and levels of business activity, are broadly similar in each of our business segments. Compensation and benefits expenses within our segments reflect, among other factors, our overall performance, as well as the performance of individual businesses. Consequently, pre-tax margins in one segment of our business may be significantly affected by the performance of our other business segments. A description of segment operating results follows.

Investment Banking

Our Investment Banking segment consists of:

Financial Advisory. Includes strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs, risk management and derivative transactions directly related to these client advisory assignments.

Underwriting. Includes public offerings and private placements, including local and cross-border transactions and acquisition financing, of a wide range of securities and other financial instruments, including loans, and derivative transactions directly related to these client underwriting activities.

The table below presents the operating results of our Investment Banking segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
Financial Advisory	**$3,507**	$3,188	$2,932
Equity underwriting	**1,646**	1,243	891
Debt underwriting	**2,709**	2,940	2,450
Total Underwriting	**4,355**	4,183	3,341
Total net revenues	**7,862**	7,371	6,273
Operating expenses	**4,346**	3,526	3,437
Pre-tax earnings	**$3,516**	$3,845	$2,836

The table below presents our financial advisory and underwriting transaction volumes.

	Year Ended December		
$ in billions	**2018**	2017	2016
Announced mergers and acquisitions	**$1,292**	$ 877	$ 901
Completed mergers and acquisitions	**$1,217**	$ 942	$1,215
Equity and equity-related offerings	**$ 67**	$ 69	$ 49
Debt offerings	**$ 257**	$ 289	$ 271

In the table above:

- Volumes are per Dealogic.
- Announced and completed mergers and acquisitions volumes are based on full credit to each of the advisors in a transaction. Equity and equity-related offerings and debt offerings are based on full credit for single book managers and equal credit for joint book managers. Transaction volumes may not be indicative of net revenues in a given period. In addition, transaction volumes for prior periods may vary from amounts previously reported due to the subsequent withdrawal or a change in the value of a transaction.
- Equity and equity-related offerings includes Rule 144A and public common stock offerings, convertible offerings and rights offerings.
- Debt offerings includes non-convertible preferred stock, mortgage-backed securities, asset-backed securities and taxable municipal debt. Includes publicly registered and Rule 144A issues. Excludes leveraged loans.

Operating Environment. During 2018, industry-wide announced and completed mergers and acquisitions activity was strong and volumes increased compared with 2017.

In underwriting, industry-wide equity and debt underwriting transactions decreased compared with 2017, reflecting a challenging market environment for financing towards the end of 2018. However, demand for initial public offerings increased compared with 2017.

In the future, if industry-wide mergers and acquisitions volumes decline, or if equity or debt underwriting transactions continue to decline, net revenues in Investment Banking would likely be negatively impacted.

During 2017, Investment Banking operated in an environment characterized by solid industry-wide mergers and acquisitions transactions, although volumes declined compared with 2016. Industry-wide debt underwriting offerings remained strong and industry-wide equity underwriting offerings increased significantly compared with 2016.

2018 versus 2017. Net revenues in Investment Banking were $7.86 billion for 2018, 7% higher than 2017.

Net revenues in Financial Advisory were $3.51 billion, 10% higher than 2017, reflecting an increase in industry-wide completed mergers and acquisitions volumes.

Net revenues in Underwriting were $4.36 billion, 4% higher than 2017, due to significantly higher net revenues in equity underwriting, driven by initial public offerings, partially offset by lower net revenues in debt underwriting, reflecting a decline in leveraged finance activity.

Operating expenses were $4.35 billion for 2018, 23% higher than 2017, primarily due to higher net provisions for litigation and regulatory proceedings, increased compensation and benefits expenses, reflecting higher net revenues, and the impact of the recently adopted revenue recognition standard. Pre-tax earnings were $3.52 billion in 2018, 9% lower than 2017. See Note 3 to the consolidated financial statements for further information about ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)."

As of December 2018, our investment banking transaction backlog increased compared with December 2017, primarily due to significantly higher estimated net revenues from potential advisory transactions. Estimated net revenues from potential debt underwriting transactions were also higher, while estimated net revenues from equity underwriting transactions were essentially unchanged.

Our investment banking transaction backlog represents an estimate of our future net revenues from investment banking transactions where we believe that future revenue realization is more likely than not. We believe changes in our investment banking transaction backlog may be a useful indicator of client activity levels which, over the long term, impact our net revenues. However, the time frame for completion and corresponding revenue recognition of transactions in our backlog varies based on the nature of the assignment, as certain transactions may remain in our backlog for longer periods of time and others may enter and leave within the same reporting period. In addition, our transaction backlog is subject to certain limitations, such as assumptions about the likelihood that individual client transactions will occur in the future. Transactions may be cancelled or modified, and transactions not included in the estimate may also occur.

2017 versus 2016. Net revenues in Investment Banking were $7.37 billion for 2017, 18% higher than 2016.

Net revenues in Financial Advisory were $3.19 billion, 9% higher than 2016, reflecting an increase in completed mergers and acquisitions transactions.

Net revenues in Underwriting were $4.18 billion, 25% higher than 2016, due to significantly higher net revenues in both debt underwriting, primarily reflecting an increase in industry-wide leveraged finance activity, and equity underwriting, reflecting an increase in industry-wide secondary offerings.

Operating expenses were $3.53 billion for 2017, 3% higher than 2016, due to increased compensation and benefits expenses, reflecting higher net revenues. Pre-tax earnings were $3.85 billion in 2017, 36% higher than 2016.

As of December 2017, our investment banking transaction backlog increased compared with December 2016, due to significantly higher estimated net revenues from potential debt underwriting transactions and significantly higher estimated net revenues from potential equity underwriting transactions, primarily in initial public offerings. These increases were partially offset by lower estimated net revenues from potential advisory transactions, principally related to mergers and acquisitions.

Institutional Client Services

Our Institutional Client Services segment consists of:

FICC Client Execution. Includes client execution activities related to making markets in both cash and derivative instruments for interest rate products, credit products, mortgages, currencies and commodities.

- **Interest Rate Products.** Government bonds (including inflation-linked securities) across maturities, other government-backed securities, securities sold under agreements to repurchase (repurchase agreements), and interest rate swaps, options and other derivatives.
- **Credit Products.** Investment-grade corporate securities, high-yield securities, credit derivatives, exchange-traded funds, bank and bridge loans, municipal securities, emerging market and distressed debt, and trade claims.
- **Mortgages.** Commercial mortgage-related securities, loans and derivatives, residential mortgage-related securities, loans and derivatives (including U.S. government agency-issued collateralized mortgage obligations and other securities and loans), and other asset-backed securities, loans and derivatives.
- **Currencies.** Currency options, spot/forwards and other derivatives on G-10 currencies and emerging-market products.
- **Commodities.** Commodity derivatives and, to a lesser extent, physical commodities, involving crude oil and petroleum products, natural gas, base, precious and other metals, electricity, coal, agricultural and other commodity products.

Equities. Includes client execution activities related to making markets in equity products and commissions and fees from executing and clearing institutional client transactions on major stock, options and futures exchanges worldwide, as well as OTC transactions. Equities also includes our securities services business, which provides financing, securities lending and other prime brokerage services to institutional clients, including hedge funds, mutual funds, pension funds and foundations, and generates revenues primarily in the form of interest rate spreads or fees.

Market-Making Activities

As a market maker, we facilitate transactions in both liquid and less liquid markets, primarily for institutional clients, such as corporations, financial institutions, investment funds and governments, to assist clients in meeting their investment objectives and in managing their risks. In this role, we seek to earn the difference between the price at which a market participant is willing to sell an instrument to us and the price at which another market participant is willing to buy it from us, and vice versa (i.e., bid/offer spread). In addition, we maintain inventory, typically for a short period of time, in response to, or in anticipation of, client demand. We also hold inventory to actively manage our risk exposures that arise from these market-making activities. Our market-making inventory is recorded in financial instruments owned (long positions) or financial instruments sold, but not yet purchased (short positions) in our consolidated statements of financial condition.

Our results are influenced by a combination of interconnected drivers, including (i) client activity levels and transactional bid/offer spreads (collectively, client activity), and (ii) changes in the fair value of our inventory and interest income and interest expense related to the holding, hedging and funding of our inventory (collectively, market-making inventory changes). Due to the integrated nature of our market-making activities, disaggregation of net revenues into client activity and market-making inventory changes is judgmental and has inherent complexities and limitations.

The amount and composition of our net revenues vary over time as these drivers are impacted by multiple interrelated factors affecting economic and market conditions, including volatility and liquidity in the market, changes in interest rates, currency exchange rates, credit spreads, equity prices and commodity prices, investor confidence, and other macroeconomic concerns and uncertainties.

In general, assuming all other market-making conditions remain constant, increases in client activity levels or bid/offer spreads tend to result in increases in net revenues, and decreases tend to have the opposite effect. However, changes in market-making conditions can materially impact client activity levels and bid/offer spreads, as well as the fair value of our inventory. For example, a decrease in liquidity in the market could have the impact of (i) increasing our bid/offer spread, (ii) decreasing investor confidence and thereby decreasing client activity levels, and (iii) wider credit spreads on our inventory positions.

The table below presents the operating results of our Institutional Client Services segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
FICC Client Execution	**$ 5,882**	$ 5,299	$ 7,556
Equities client execution	**2,835**	2,046	2,194
Commissions and fees	**3,055**	2,920	3,078
Securities services	**1,710**	1,637	1,639
Total Equities	**7,600**	6,603	6,911
Total net revenues	**13,482**	11,902	14,467
Operating expenses	**10,351**	9,692	9,713
Pre-tax earnings	**$ 3,131**	$ 2,210	$ 4,754

The table below presents the net revenues of our Institutional Client Services segment by line item in the consolidated statements of earnings.

$ in millions	FICC Client Execution	Total Equities	Institutional Client Services
Year Ended December 2018			
Market making	**$ 5,211**	**$ 4,240**	**$ 9,451**
Commissions and fees	**–**	**3,055**	**3,055**
Net interest income	**671**	**305**	**976**
Total net revenues	**$ 5,882**	**$ 7,600**	**$13,482**
Year Ended December 2017			
Market making	$ 4,403	$ 3,257	$ 7,660
Commissions and fees	–	2,920	2,920
Net interest income	896	426	1,322
Total net revenues	$ 5,299	$ 6,603	$11,902
Year Ended December 2016			
Market making	$ 6,803	$ 3,130	$ 9,933
Commissions and fees	–	3,078	3,078
Net interest income	753	703	1,456
Total net revenues	$ 7,556	$ 6,911	$14,467

In the table above:

- The difference between commissions and fees and those in the consolidated statements of earnings represents commissions and fees included in our Investment Management segment.
- See "Net Revenues" for further information about market making revenues, commissions and fees, and net interest income. See Note 25 to the consolidated financial statements for net interest income by business segment.
- The primary driver of net revenues for FICC Client Execution was client activity.

Operating Environment. During 2018, Institutional Client Services operated in an environment characterized by generally higher levels of volatility and improved client activity, compared with a low volatility environment in 2017. The average daily VIX for 2018 increased to 17, reflecting periods of high volatility in the first and fourth quarters of 2018, compared with 11 for 2017. In 2018, global equity markets generally decreased (with the MSCI World Index down 11%) and in credit markets, spreads generally widened (with U.S. high-yield credit spreads wider by 139 basis points), both particularly towards the end of the year. Oil prices decreased to $45 per barrel (WTI), while natural gas prices were essentially unchanged at $2.94 per million British thermal units compared to the end of 2017. If activity levels decline, net revenues in Institutional Client Services would likely be negatively impacted. See "Business Environment" for further information about economic and market conditions in the global operating environment during the year.

During 2017, low volatility levels in equity, fixed income, currency and commodity markets impacted the operating environment for Institutional Client Services. This negatively affected client activity across businesses, particularly in FICC Client Execution. Although market-making conditions were challenged, global equity markets increased compared with 2016, and credit spreads generally tightened.

2018 versus 2017. Net revenues in Institutional Client Services were $13.48 billion for 2018, 13% higher than 2017.

Net revenues in FICC Client Execution were $5.88 billion, 11% higher than 2017, primarily reflecting higher client activity.

The following provides information about our FICC Client Execution net revenues by business, compared with 2017 results:

- Net revenues in commodities were significantly higher, reflecting the impact of improved market-making conditions on our inventory, compared with challenging conditions in 2017, and higher client activity.
- Net revenues in currencies were significantly higher, primarily reflecting higher client activity.
- Net revenues in interest rate products and mortgages were both slightly lower, reflecting lower client activity.
- Net revenues in credit products were essentially unchanged, reflecting the impact of challenging market-making conditions on our inventory, particularly during the fourth quarter of 2018, offset by higher client activity.

For 2018, approximately 90% of the net revenues in FICC Client Execution were generated from market intermediation and approximately 10% were generated from financing. FICC Client Execution financing net revenues include net revenues primarily from short-term repurchase agreement activities.

Net revenues in Equities were $7.60 billion, 15% higher than 2017, primarily due to significantly higher net revenues in equities client execution, reflecting significantly higher net revenues in both cash products and derivatives. In addition, commissions and fees were higher, reflecting an increase in our listed cash equity and futures volumes, generally consistent with market volumes. Net revenues in securities services were slightly higher.

For 2018, approximately 60% of the net revenues in Equities were generated from market intermediation and approximately 40% were generated from financing. Equities financing net revenues include net revenues from prime brokerage and other financing activities, including securities lending, margin lending and swaps.

Operating expenses were $10.35 billion for 2018, 7% higher than 2017, primarily due to increased compensation and benefits expenses, reflecting higher net revenues, higher net provisions for litigation and regulatory proceedings, and higher brokerage, clearing and exchange fees. Pre-tax earnings were $3.13 billion in 2018, 42% higher than 2017.

2017 versus 2016. Net revenues in Institutional Client Services were $11.90 billion for 2017, 18% lower than 2016.

Net revenues in FICC Client Execution were $5.30 billion, 30% lower than 2016, reflecting significantly lower client activity. Approximately one-third of the decline in FICC Client Execution net revenues was due to significantly lower results in commodities.

The following provides information about our FICC Client Execution net revenues by business, compared with 2016 results:

- Net revenues in commodities were significantly lower, reflecting the impact of challenging market-making conditions on our inventory.
- Net revenues in interest rate products were significantly lower, reflecting lower client activity.
- Net revenues in currencies were significantly lower, reflecting lower client activity and the impact of challenging market-making conditions on our inventory.
- Net revenues in credit products were significantly lower, reflecting lower client activity.
- Net revenues in mortgages were significantly higher, reflecting the impact of favorable market-making conditions on our inventory, including generally tighter spreads, compared with a challenging 2016.

Net revenues in Equities were $6.60 billion, 4% lower than 2016, primarily due to lower commissions and fees, reflecting a decline in our listed cash equity volumes in the U.S. Market volumes in the U.S. also declined. In addition, net revenues in equities client execution were lower, reflecting lower net revenues in derivatives, partially offset by higher net revenues in cash products. Net revenues in securities services were essentially unchanged.

Operating expenses were $9.69 billion for 2017, essentially unchanged compared with 2016, due to decreased compensation and benefits expenses, reflecting lower net revenues, largely offset by increased technology expenses, reflecting higher expenses related to cloud-based services and software depreciation, and increased consulting costs. Pre-tax earnings were $2.21 billion in 2017, 54% lower than 2016.

Investing & Lending

Investing & Lending includes our investing activities and the origination of loans, including our relationship lending activities, to provide financing to clients. These investments and loans are typically longer-term in nature. We make investments, some of which are consolidated, including through our Merchant Banking business and our Special Situations Group, in debt securities and loans, public and private equity securities, infrastructure and real estate entities. Some of these investments are made indirectly through funds that we manage. We also make unsecured loans through our digital platform, *Marcus: by Goldman Sachs* and secured loans through our digital platform, *Goldman Sachs Private Bank Select*.

The table below presents the operating results of our Investing & Lending segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
Equity securities	**$4,455**	$4,578	$2,573
Debt securities and loans	**3,795**	2,660	1,689
Total net revenues	**8,250**	7,238	4,262
Provision for credit losses	**674**	657	182
Operating expenses	**3,365**	2,796	2,386
Pre-tax earnings	**$4,211**	$3,785	$1,694

Operating Environment. During 2018, our investments in private equities benefited from company-specific events, including sales, and strong corporate performance, while investments in public equities reflected losses, as global equity prices generally decreased. Results for our investments in debt securities and loans reflected continued growth in loans receivables, resulting in higher net interest income. If macroeconomic concerns negatively affect corporate performance or the origination of loans, or if global equity prices continue to decline, net revenues in Investing & Lending would likely be negatively impacted.

During 2017, generally higher global equity prices and tighter credit spreads contributed to a favorable environment for our equity and debt investments. Results also reflected net gains from company-specific events, including sales, and corporate performance.

2018 versus 2017. Net revenues in Investing & Lending were $8.25 billion for 2018, 14% higher than 2017.

Net revenues in equity securities were $4.46 billion, 3% lower than 2017, reflecting net losses from investments in public equities (2018 included $183 million of net losses) compared with net gains in the prior year, partially offset by significantly higher net gains from investments in private equities (2018 included $4.64 billion of net gains), driven by company-specific events, including sales, and corporate performance. For 2018, 60% of the net revenues in equity securities were generated from corporate investments and 40% were generated from real estate.

Net revenues in debt securities and loans were $3.80 billion, 43% higher than 2017, primarily driven by significantly higher net interest income. 2018 included net interest income of approximately $2.70 billion compared with approximately $1.80 billion in 2017.

Provision for credit losses was $674 million for 2018, compared with $657 million for 2017, as the higher provision for credit losses primarily related to consumer loan growth in 2018 was partially offset by an impairment of approximately $130 million on a secured loan in 2017.

Operating expenses were $3.37 billion for 2018, 20% higher than 2017, primarily due to increased expenses related to consolidated investments and our digital lending and deposit platform, and increased compensation and benefits expenses, reflecting higher net revenues. Pre-tax earnings were $4.21 billion in 2018, 11% higher than 2017.

2017 versus 2016. Net revenues in Investing & Lending were $7.24 billion for 2017, 70% higher than 2016.

Net revenues in equity securities were $4.58 billion, 78% higher than 2016, primarily reflecting a significant increase in net gains from private equities (2017 included $3.82 billion of net gains), which were positively impacted by company-specific events and corporate performance. In addition, net gains from public equities (2017 included $762 million of net gains) were significantly higher, as global equity prices increased during the year. For 2017, 64% of the net revenues in equity securities were generated from corporate investments and 36% were generated from real estate.

Net revenues in debt securities and loans were $2.66 billion, 57% higher than 2016, reflecting significantly higher net interest income (2017 included approximately $1.80 billion of net interest income).

Provision for credit losses was $657 million for 2017, compared with $182 million for 2016, reflecting an increase in impairments, which included an impairment of approximately $130 million on a secured loan in 2017, and higher provision for credit losses primarily related to consumer loan growth.

Operating expenses were $2.80 billion for 2017, 17% higher than 2016, due to increased compensation and benefits expenses, reflecting higher net revenues, increased expenses related to consolidated investments, and increased expenses related to our digital lending and deposit platform. Pre-tax earnings were $3.79 billion in 2017 compared with $1.69 billion in 2016.

Investment Management

Investment Management provides investment management services and offers investment products (primarily through separately managed accounts and commingled vehicles, such as mutual funds and private investment funds) across all major asset classes to a diverse set of institutional and individual clients. Investment Management also offers wealth advisory services provided by our subsidiary, The Ayco Company, L.P., including portfolio management and financial planning and counseling, and brokerage and other transaction services to high-net-worth individuals and families.

Assets under supervision (AUS) include client assets where we earn a fee for managing assets on a discretionary basis. This includes net assets in our mutual funds, hedge funds, credit funds and private equity funds (including real estate funds), and separately managed accounts for institutional and individual investors. Assets under supervision also include client assets invested with third-party managers, bank deposits and advisory relationships where we earn a fee for advisory and other services, but do not have investment discretion. Assets under supervision do not include the self-directed brokerage assets of our clients. Long-term assets under supervision represent assets under supervision excluding liquidity products. Liquidity products represent money market and bank deposit assets.

Assets under supervision typically generate fees as a percentage of net asset value, which vary by asset class, distribution channel and the type of services provided, and are affected by investment performance, as well as asset inflows and redemptions. Asset classes such as alternative investment and equity assets typically generate higher fees relative to fixed income and liquidity product assets. The average effective management fee (which excludes non-asset-based fees) we earned on our assets under supervision was 34 basis points for 2018 and 35 basis points for both 2017 and 2016.

In certain circumstances, we are also entitled to receive incentive fees based on a percentage of a fund's or a separately managed account's return, or when the return exceeds a specified benchmark or other performance targets.

The table below presents the operating results of our Investment Management segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
Management and other fees	**$5,438**	$5,144	$4,798
Incentive fees	**830**	417	421
Transaction revenues	**754**	658	569
Total net revenues	**7,022**	6,219	5,788
Operating expenses	**5,267**	4,800	4,654
Pre-tax earnings	**$1,755**	$1,419	$1,134

The table below presents period-end assets under supervision by asset class, distribution channel, region and vehicle.

	As of December		
$ in billions	**2018**	2017	2016
Asset Class			
Alternative investments	**$ 167**	$ 168	$ 154
Equity	**301**	321	266
Fixed income	**677**	660	601
Total long-term AUS	**1,145**	1,149	1,021
Liquidity products	**397**	345	358
Total AUS	**$1,542**	$1,494	$1,379
Distribution Channel			
Institutional	**$ 575**	$ 576	$ 511
High-net-worth individuals	**455**	458	413
Third-party distributed	**512**	460	455
Total AUS	**$1,542**	$1,494	$1,379
Region			
Americas	**$1,151**	$1,120	$1,042
Europe, Middle East and Africa	**239**	229	211
Asia	**152**	145	126
Total AUS	**$1,542**	$1,494	$1,379
Vehicle			
Separate accounts	**$ 867**	$ 857	$ 763
Public funds	**506**	482	469
Private funds and other	**169**	155	147
Total AUS	**$1,542**	$1,494	$1,379

In the table above, alternative investments primarily includes hedge funds, credit funds, private equity, real estate, currencies, commodities and asset allocation strategies.

The table below presents changes in assets under supervision.

	Year Ended December		
$ in billions	**2018**	2017	2016
Beginning balance	**$1,494**	$1,379	$1,252
Net inflows/(outflows):			
Alternative investments	**1**	15	5
Equity	**13**	2	(3)
Fixed income	**23**	25	40
Total long-term AUS net inflows/(outflows)	**37**	42	42
Liquidity products	**52**	(13)	52
Total AUS net inflows/(outflows)	**89**	29	94
Net market appreciation/(depreciation)	**(41)**	86	33
Ending balance	**$1,542**	$1,494	$1,379

In the table above, total AUS net inflows/(outflows) for 2017 included $23 billion of inflows ($20 billion in long-term AUS and $3 billion in liquidity products) in connection with the acquisition of a portion of Verus Investors' outsourced chief investment officer business (Verus acquisition) and $5 billion of equity asset outflows in connection with the divestiture of our local Australian-focused investment capabilities and fund platform (Australian divestiture).

The table below presents average monthly assets under supervision by asset class.

	Average for the Year Ended December		
$ in billions	**2018**	2017	2016
Alternative investments	**$ 171**	$ 162	$ 149
Equity	**329**	292	256
Fixed income	**665**	633	578
Total long-term AUS	**1,165**	1,087	983
Liquidity products	**352**	330	326
Total AUS	**$1,517**	$1,417	$1,309

Operating Environment. During 2018, our assets under supervision increased reflecting net inflows in liquidity products, fixed income assets and equity assets. This increase was partially offset by depreciation in our client assets, primarily in equity assets, as global equity prices generally decreased in 2018, particularly towards the end of the year. The mix of our average assets under supervision between long-term assets under supervision and liquidity products during 2018 was essentially unchanged compared with 2017. In the future, if asset prices continue to decline, or investors continue to favor assets that typically generate lower fees or investors withdraw their assets, net revenues in Investment Management would likely be negatively impacted.

During 2017, Investment Management operated in an environment characterized by generally higher asset prices, resulting in appreciation in both equity and fixed income assets. Our long-term assets under supervision increased from net inflows primarily in fixed income and alternative investment assets. These increases were partially offset by net outflows in liquidity products. As a result, the mix of our average assets under supervision during 2017 shifted slightly from liquidity products to long-term assets under supervision compared to the mix at the end of 2016.

2018 versus 2017. Net revenues in Investment Management were $7.02 billion for 2018, 13% higher than 2017, primarily due to significantly higher incentive fees, as a result of harvesting. Management and other fees were also higher, reflecting higher average assets under supervision and the impact of the recently adopted revenue recognition standard, partially offset by shifts in the mix of client assets and strategies. In addition, transaction revenues were higher. See Note 3 to the consolidated financial statements for further information about ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)."

During 2018, total assets under supervision increased $48 billion to $1.54 trillion. Long-term assets under supervision decreased $4 billion, including net market depreciation of $41 billion primarily in equity assets, largely offset by net inflows of $37 billion, primarily in fixed income and equity assets. Liquidity products increased $52 billion.

Operating expenses were $5.27 billion for 2018, 10% higher than 2017, primarily due to the impact of the recently adopted revenue recognition standard and increased compensation and benefits expenses, reflecting higher net revenues. Pre-tax earnings were $1.76 billion in 2018, 24% higher than 2017. See Note 3 to the consolidated financial statements for further information about ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)."

2017 versus 2016. Net revenues in Investment Management were $6.22 billion for 2017, 7% higher than 2016, due to higher management and other fees, reflecting higher average assets under supervision, and higher transaction revenues.

During 2017, total assets under supervision increased $115 billion to $1.49 trillion. Long-term assets under supervision increased $128 billion, including net market appreciation of $86 billion, primarily in equity and fixed income assets, and net inflows of $42 billion (which includes $20 billion of inflows in connection with the Verus acquisition and $5 billion of equity asset outflows in connection with the Australian divestiture), primarily in fixed income and alternative investment assets. Liquidity products decreased $13 billion (which includes $3 billion of inflows in connection with the Verus acquisition).

Operating expenses were $4.80 billion for 2017, 3% higher than 2016, primarily due to increased compensation and benefits expenses, reflecting higher net revenues. Pre-tax earnings were $1.42 billion in 2017, 25% higher than 2016.

Geographic Data

See Note 25 to the consolidated financial statements for a summary of our total net revenues, pre-tax earnings and net earnings by geographic region.

Balance Sheet and Funding Sources

Balance Sheet Management

One of our risk management disciplines is our ability to manage the size and composition of our balance sheet. While our asset base changes due to client activity, market fluctuations and business opportunities, the size and composition of our balance sheet also reflects factors including (i) our overall risk tolerance, (ii) the amount of equity capital we hold and (iii) our funding profile, among other factors. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" for information about our equity capital management process.

Although our balance sheet fluctuates on a day-to-day basis, our total assets at quarter-end and year-end dates are generally not materially different from those occurring within our reporting periods.

In order to ensure appropriate risk management, we seek to maintain a sufficiently liquid balance sheet and have processes in place to dynamically manage our assets and liabilities, which include (i) balance sheet planning, (ii) balance sheet limits, (iii) monitoring of key metrics and (iv) scenario analyses.

Balance Sheet Planning. We prepare a balance sheet plan that combines our projected total assets and composition of assets with our expected funding sources over a three-year time horizon. This plan is reviewed quarterly and may be adjusted in response to changing business needs or market conditions. The objectives of this planning process are:

- To develop our balance sheet projections, taking into account the general state of the financial markets and expected business activity levels, as well as regulatory requirements;
- To allow Treasury and our independent risk oversight and control functions to objectively evaluate balance sheet limit requests from our revenue-producing units in the context of our overall balance sheet constraints, including our liability profile and equity capital levels, and key metrics; and
- To inform the target amount, tenor and type of funding to raise, based on our projected assets and contractual maturities.

Treasury and our independent risk oversight and control functions, along with our revenue-producing units, review current and prior period information and expectations for the year to prepare our balance sheet plan. The specific information reviewed includes asset and liability size and composition, limit utilization, risk and performance measures, and capital usage.

Our consolidated balance sheet plan, including our balance sheets by business, funding projections and projected key metrics, is reviewed and approved by the Firmwide Asset Liability Committee and the Risk Governance Committee. See "Risk Management — Overview and Structure of Risk Management" for an overview of our risk management structure.

Balance Sheet Limits. The Firmwide Asset Liability Committee and the Risk Governance Committee have the responsibility of reviewing and approving balance sheet limits. These limits are set at levels which are close to actual operating levels, rather than at levels which reflect our maximum risk appetite, in order to ensure prompt escalation and discussion among our revenue-producing units, Treasury and our independent risk oversight and control functions on a routine basis. The Firmwide Asset Liability Committee and the Risk Governance Committee review and approve balance sheet limits. In addition, the Risk Governance Committee sets aged inventory limits for certain financial instruments as a disincentive to hold inventory over longer periods of time. Requests for changes in limits are evaluated after giving consideration to their impact on our key metrics. Compliance with limits is monitored by our revenue-producing units and Treasury, as well as our independent risk oversight and control functions.

Monitoring of Key Metrics. We monitor key balance sheet metrics both by business and on a consolidated basis, including asset and liability size and composition, limit utilization and risk measures. We allocate assets to businesses and review and analyze movements resulting from new business activity, as well as market fluctuations.

Scenario Analyses. We conduct various scenario analyses including as part of the Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act Stress Tests (DFAST), as well as our resolution and recovery planning. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" for further information about these scenario analyses. These scenarios cover short-term and long-term time horizons using various macroeconomic and firm-specific assumptions, based on a range of economic scenarios. We use these analyses to assist us in developing our longer-term balance sheet management strategy, including the level and composition of assets, funding and equity capital. Additionally, these analyses help us develop approaches for maintaining appropriate funding, liquidity and capital across a variety of situations, including a severely stressed environment.

Balance Sheet Allocation

In addition to preparing our consolidated statements of financial condition in accordance with U.S. GAAP, we prepare a balance sheet that generally allocates assets to our businesses, which is a non-GAAP presentation and may not be comparable to similar non-GAAP presentations used by other companies. We believe that presenting our assets on this basis is meaningful because it is consistent with the way management views and manages risks associated with our assets and better enables investors to assess the liquidity of our assets.

The table below presents our balance sheet allocation.

	As of December	
$ in millions	**2018**	2017
GCLA, segregated assets and other	**$313,138**	$285,270
Secured client financing	**145,232**	164,123
Inventory	**204,584**	216,883
Secured financing agreements	**61,632**	64,991
Receivables	**42,006**	36,750
Institutional Client Services	**308,222**	318,624
Public equity	**1,445**	2,072
Private equity	**19,985**	20,253
Total equity	**21,430**	22,325
Loans receivable	**80,590**	65,933
Loans, at fair value	**13,416**	14,877
Total loans	**94,006**	80,810
Debt securities	**11,215**	8,797
Other	**7,913**	8,481
Investing & Lending	**134,564**	120,413
Total inventory and related assets	**442,786**	439,037
Other assets	**30,640**	28,346
Total assets	**$931,796**	$916,776

The following is a description of the captions in the table above:

- **Global Core Liquid Assets (GCLA), Segregated Assets and Other.** We maintain liquidity to meet a broad range of potential cash outflows and collateral needs in a stressed environment. See "Risk Management — Liquidity Risk Management" for information about the composition and sizing of our GCLA. We also segregate cash and securities for regulatory and other purposes related to client activity. Securities are segregated from our own inventory, as well as from collateral obtained through securities borrowed or securities purchased under agreements to resell (resale agreements). In addition, we maintain other unrestricted operating cash balances, primarily for use in specific currencies, entities or jurisdictions where we do not have immediate access to parent company liquidity.
- **Secured Client Financing.** We provide collateralized financing for client positions, including margin loans secured by client collateral, securities borrowed, and resale agreements primarily collateralized by government obligations. Our secured client financing arrangements, which are generally short-term, are accounted for at fair value or at amounts that approximate fair value, and include daily margin requirements to mitigate counterparty credit risk.
- **Institutional Client Services.** We maintain inventory positions to facilitate market making in fixed income, equity, currency and commodity products. Additionally, as part of market-making activities, we enter into resale or securities borrowing arrangements to obtain securities or use our own inventory to cover transactions in which we or our clients have sold securities that have not yet been purchased. The receivables in Institutional Client Services primarily relate to securities transactions.
- **Investing & Lending.** We invest in and originate loans to provide financing to clients. These investments and loans are typically longer-term in nature. We make investments, through our Merchant Banking business and our Special Situations Group, in debt securities, loans and public and private equity. We also originate secured and unsecured loans through our digital platforms. Other Investing & Lending primarily includes customer and other receivables.

Equity. We make equity investments in corporate and real estate entities. As of December 2018, 30% of total equity was in investments made in 2011 or earlier, 23% was in investments made during 2012 through 2014, and 47% was in investments made since the beginning of 2015.

The table below presents equity by type and region.

	As of December	
$ in millions	**2018**	2017
Equity Type		
Corporate	**$17,262**	$18,194
Real Estate	**4,168**	4,131
Total	**$21,430**	$22,325
Region		
Americas	**53%**	54%
Europe, Middle East and Africa	**16%**	18%
Asia	**31%**	28%
Total	**100%**	100%

Loans. The table below presents loans by type and region.

$ in millions	Loans Receivable	Loans, at Fair Value	Total
As of December 2018			
Loan Type			
Corporate loans	**$37,283**	**$ 2,819**	**$40,102**
PWM loans	**17,219**	**7,250**	**24,469**
Commercial real estate loans	**11,441**	**1,718**	**13,159**
Residential real estate loans	**7,284**	**973**	**8,257**
Consumer loans	**4,536**	**–**	**4,536**
Other loans	**3,893**	**656**	**4,549**
Allowance for loan losses	**(1,066)**	**–**	**(1,066)**
Total	**$80,590**	**$13,416**	**$94,006**
Region			
Americas	**67%**	**11%**	**78%**
Europe, Middle East and Africa	**16%**	**2%**	**18%**
Asia	**3%**	**1%**	**4%**
Total	**86%**	**14%**	**100%**
As of December 2017			
Loan Type			
Corporate loans	$30,749	$ 3,924	$34,673
PWM loans	16,591	7,102	23,693
Commercial real estate loans	7,987	1,825	9,812
Residential real estate loans	6,234	1,043	7,277
Consumer loans	1,912	–	1,912
Other loans	3,263	983	4,246
Allowance for loan losses	(803)	–	(803)
Total	$65,933	$14,877	$80,810
Region			
Americas	64%	13%	77%
Europe, Middle East and Africa	14%	4%	18%
Asia	4%	1%	5%
Total	82%	18%	100%

In the table above:

- As of December 2018, corporate loans included $15.50 billion of loans relating to our relationship lending and investment banking activities, $6.99 billion relating to collateralized inventory financing and the remainder of the loans related to other corporate lending activities, including middle market lending. As of December 2017, corporate loans included $11.96 billion of loans relating to our relationship lending and investment banking activities, $5.49 billion relating to collateralized inventory financing and the remainder of the loans related to other corporate lending activities, including middle market lending.
- Approximately 85% of total loans were secured as of both December 2018 and December 2017.
- See Note 9 to the consolidated financial statements for further information about loans receivable.

- **Other Assets.** Other assets are generally less liquid, nonfinancial assets, including property, leasehold improvements and equipment, goodwill and identifiable intangible assets, income tax-related receivables and miscellaneous receivables. Other assets included $13.21 billion as of December 2018 and $9.42 billion as of December 2017, held by consolidated investment entities (CIEs) in connection with our Investing & Lending segment activities. Substantially all of such assets relate to CIEs engaged in real estate investment activities. These entities were funded with liabilities of approximately $6 billion as of December 2018 and $4 billion as of December 2017. Substantially all such liabilities were nonrecourse, thereby reducing our equity at risk.

The table below presents the reconciliation of our balance sheet allocation to our U.S. GAAP balance sheet.

$ in millions	GCLA, Segregated Assets and Other	Secured Client Financing	Institutional Client Services	Investing & Lending	Total
As of December 2018					
Cash and cash equivalents	**$130,547**	**$ –**	**$ –**	**$ –**	**$130,547**
Resale agreements	**87,022**	**32,389**	**19,808**	**39**	**139,258**
Securities borrowed	**10,382**	**83,079**	**41,824**	**–**	**135,285**
Loans receivable	**–**	**–**	**–**	**80,590**	**80,590**
Customer and other receivables	**–**	**29,764**	**42,006**	**7,545**	**79,315**
Financial instruments owned	**85,187**	**–**	**204,584**	**46,390**	**336,161**
Subtotal	**$313,138**	**$145,232**	**$308,222**	**$134,564**	**$901,156**
Other assets					**30,640**
Total assets					**$931,796**
As of December 2017					
Cash and cash equivalents	$110,051	$ –	$ –	$ –	$110,051
Resale agreements	73,277	26,202	20,931	412	120,822
Securities borrowed	49,242	97,546	44,060	–	190,848
Loans receivable	–	–	–	65,933	65,933
Customer and other receivables	–	40,375	36,750	7,663	84,788
Financial instruments owned	52,700	–	216,883	46,405	315,988
Subtotal	$285,270	$164,123	$318,624	$120,413	$888,430
Other assets					28,346
Total assets					$916,776

In the table above:

- Total assets for Institutional Client Services and Investing & Lending represent inventory and related assets. These amounts differ from total assets by business segment disclosed in Note 25 to the consolidated financial statements because total assets disclosed in Note 25 include allocations of our GCLA, segregated assets and other, secured client financing and other assets.
- See "Balance Sheet Analysis and Metrics" for explanations on the changes in our balance sheet from December 2017 to December 2018.

Balance Sheet Analysis and Metrics

As of December 2018, total assets in our consolidated statements of financial condition were $931.80 billion, an increase of $15.02 billion from December 2017, reflecting increases in cash and cash equivalents of $20.50 billion, financial instruments owned of $20.17 billion, and loans receivable of $14.66 billion, partially offset by a net decrease in collateralized agreements of $37.13 billion. The increase in cash and cash equivalents reflected the impact of our and clients' activities. The increase in financial instruments owned primarily reflected higher client activity in government and agency obligations, partially offset by lower activity in equity securities by us and our clients. The increase in loans receivable primarily reflected an increase in corporate and commercial real estate loans. The net decrease in collateralized agreements reflected the impact of our and clients' activities.

As of December 2018, total liabilities in our consolidated statements of financial condition were $841.61 billion, an increase of $7.08 billion from December 2017, primarily reflecting increases in deposits of $19.65 billion and unsecured long-term borrowings of $6.46 billion, partially offset by decreases in collateralized financings of $12.34 billion and unsecured short term borrowings of $6.42 billion. The increase in deposits primarily reflected an increase in consumer deposits. The increase in unsecured long-term borrowings was primarily due to net new issuances. The decrease in collateralized financings reflected the impact of our and clients' activities. The decrease in unsecured short term borrowings was primarily due to maturities and early retirements.

Our total repurchase agreements, accounted for as collateralized financings, were $78.72 billion as of December 2018 and $84.72 billion as of December 2017, which were 1% higher as of December 2018 and 2% lower as of December 2017 than the daily average amount of repurchase agreements over the respective quarters, and 12% lower as of December 2018 and 1% lower as of December 2017 than the daily average amount of repurchase agreements over the respective years. As of December 2018, the increase in our repurchase agreements relative to the daily average during the quarter, and decrease in our repurchase agreements relative to the daily average during the year, resulted from client and our activity at the end of the period.

The level of our repurchase agreements fluctuates between and within periods, primarily due to providing clients with access to highly liquid collateral, such as liquid government and agency obligations, through collateralized financing activities.

The table below presents information about the balance sheet and the leverage ratios.

	As of December	
$ in millions	**2018**	2017
Total assets	**$931,796**	$916,776
Unsecured long-term borrowings	**$224,149**	$217,687
Total shareholders' equity	**$ 90,185**	$ 82,243
Leverage ratio	**10.3x**	11.1x
Debt to equity ratio	**2.5x**	2.6x

In the table above:

- The leverage ratio equals total assets divided by total shareholders' equity and measures the proportion of equity and debt we use to finance assets. This ratio is different from the leverage ratios included in Note 20 to the consolidated financial statements.
- The debt to equity ratio equals unsecured long-term borrowings divided by total shareholders' equity.

The table below presents information about shareholders' equity and book value per common share, including the reconciliation of total shareholders' equity to tangible common shareholders' equity.

	As of December	
$ in millions, except per share amounts	**2018**	2017
Total shareholders' equity	**$ 90,185**	$ 82,243
Preferred stock	**(11,203)**	(11,853)
Common shareholders' equity	**78,982**	70,390
Goodwill and identifiable intangible assets	**(4,082)**	(4,038)
Tangible common shareholders' equity	**$ 74,900**	$ 66,352
Book value per common share	**$ 207.36**	$ 181.00
Tangible book value per common share	**$ 196.64**	$ 170.61

In the table above:

- Tangible common shareholders' equity equals total shareholders' equity less preferred stock, goodwill and identifiable intangible assets. We believe that tangible common shareholders' equity is meaningful because it is a measure that we and investors use to assess capital adequacy. Tangible common shareholders' equity is a non-GAAP measure and may not be comparable to similar non-GAAP measures used by other companies.
- Book value per common share and tangible book value per common share are based on common shares outstanding and restricted stock units granted to employees with no future service requirements (collectively, basic shares) of 380.9 million as of December 2018 and 388.9 million as of December 2017. We believe that tangible book value per common share (tangible common shareholders' equity divided by basic shares) is meaningful because it is a measure that we and investors use to assess capital adequacy. Tangible book value per common share is a non-GAAP measure and may not be comparable to similar non-GAAP measures used by other companies.

Funding Sources

Our primary sources of funding are deposits, collateralized financings, unsecured short-term and long-term borrowings, and shareholders' equity. We seek to maintain broad and diversified funding sources globally across products, programs, markets, currencies and creditors to avoid funding concentrations.

The table below presents information about our funding sources.

	As of December			
$ in millions	**2018**		2017	
Deposits	**$158,257**	**25%**	$138,604	23%
Collateralized financings:				
Repurchase agreements	**78,723**	**13%**	84,718	14%
Securities loaned	**11,808**	**2%**	14,793	2%
Other secured financings	**21,433**	**3%**	24,788	4%
Total collateralized financings	**111,964**	**18%**	124,299	20%
Unsecured short-term borrowings	**40,502**	**7%**	46,922	8%
Unsecured long-term borrowings	**224,149**	**36%**	217,687	36%
Total shareholders' equity	**90,185**	**14%**	82,243	13%
Total funding sources	**$625,057**	**100%**	$609,755	100%

Our funding is primarily raised in U.S. dollar, Euro, British pound and Japanese yen. We generally distribute our funding products through our own sales force and third-party distributors to a large, diverse creditor base in a variety of markets in the Americas, Europe and Asia. We believe that our relationships with our creditors are critical to our liquidity. Our creditors include banks, governments, securities lenders, corporations, pension funds, insurance companies, mutual funds and individuals. We have imposed various internal guidelines to monitor creditor concentration across our funding programs.

Deposits. Our deposits provide us with a diversified source of funding and reduce our reliance on wholesale funding. A growing portion of our deposit base consists of consumer deposits. Deposits are primarily used to finance lending activity, other inventory and a portion of our GCLA. We raise deposits, including savings, demand and time deposits, through internal and third-party broker-dealers, and from consumers and institutional clients, and primarily through Goldman Sachs Bank USA (GS Bank USA) and Goldman Sachs International Bank (GSIB). In September 2018, we launched *Marcus: by Goldman Sachs* in the U.K. to accept deposits. See Note 14 to the consolidated financial statements for further information about our deposits.

Secured Funding. We fund a significant amount of inventory on a secured basis. Secured funding includes collateralized financings in the consolidated statements of financial condition. We may also pledge our inventory as collateral for securities borrowed under a securities lending agreement. We also use our own inventory to cover transactions in which we or our clients have sold securities that have not yet been purchased. Secured funding is less sensitive to changes in our credit quality than unsecured funding, due to our posting of collateral to our lenders. Nonetheless, we continually analyze the refinancing risk of our secured funding activities, taking into account trade tenors, maturity profiles, counterparty concentrations, collateral eligibility and counterparty roll over probabilities. We seek to mitigate our refinancing risk by executing term trades with staggered maturities, diversifying counterparties, raising excess secured funding, and pre-funding residual risk through our GCLA.

We seek to raise secured funding with a term appropriate for the liquidity of the assets that are being financed, and we seek longer maturities for secured funding collateralized by asset classes that may be harder to fund on a secured basis, especially during times of market stress. Our secured funding, excluding funding collateralized by liquid government and agency obligations, is primarily executed for tenors of one month or greater and is primarily executed through term repurchase agreements and securities loaned contracts.

The weighted average maturity of our secured funding included in collateralized financings in the consolidated statements of financial condition, excluding funding that can only be collateralized by liquid government and agency obligations, exceeded 120 days as of December 2018.

Assets that may be harder to fund on a secured basis during times of market stress include certain financial instruments in the following categories: mortgage and other asset-backed loans and securities, non-investment-grade corporate debt securities, equity securities and emerging market securities. Assets that are classified in level 3 of the fair value hierarchy are generally funded on an unsecured basis. See Notes 5 and 6 to the consolidated financial statements for further information about the classification of financial instruments in the fair value hierarchy and "Unsecured Long-Term Borrowings" below for further information about the use of unsecured long-term borrowings as a source of funding.

We also raise financing through other types of collateralized financings, such as secured loans and notes. GS Bank USA has access to funding from the Federal Home Loan Bank. Our outstanding borrowings against the Federal Home Loan Bank were $528 million as of December 2018 and $3.40 billion as of December 2017.

GS Bank USA also has access to funding through the Federal Reserve Bank discount window. While we do not rely on this funding in our liquidity planning and stress testing, we maintain policies and procedures necessary to access this funding and test discount window borrowing procedures.

Unsecured Short-Term Borrowings. A significant portion of our unsecured short-term borrowings was originally long-term debt that is scheduled to mature within one year of the reporting date. We use unsecured short-term borrowings, including U.S. and non-U.S. hybrid financial instruments, to finance liquid assets and for other cash management purposes. In light of regulatory developments, Group Inc. no longer issues debt with an original maturity of less than one year, other than to its subsidiaries. See Note 15 to the consolidated financial statements for further information about our unsecured short-term borrowings.

Unsecured Long-Term Borrowings. We issue unsecured long-term borrowings as a source of funding for inventory and other assets and to finance a portion of our GCLA. Unsecured long-term borrowings, including structured notes, are raised through syndicated U.S. registered offerings, U.S. registered and Rule 144A medium-term note programs, offshore medium-term note offerings and other debt offerings. We issue in different tenors, currencies and products to maximize the diversification of our investor base.

The table below presents the quarterly unsecured long-term borrowings maturity profile as of December 2018.

$ in millions	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2020	**$ 6,740**	**$9,744**	**$6,308**	**$6,579**	**$ 29,371**
2021	**$ 3,288**	**$4,162**	**$7,790**	**$7,724**	**22,964**
2022	**$ 6,151**	**$6,067**	**$5,365**	**$5,876**	**23,459**
2023	**$10,076**	**$4,958**	**$8,343**	**$4,495**	**27,872**
2024 - thereafter					**120,483**
Total					**$224,149**

The weighted average maturity of our unsecured long-term borrowings as of December 2018 was approximately eight years. To mitigate refinancing risk, we seek to limit the principal amount of debt maturing over the course of any monthly, quarterly or annual time horizon. We enter into interest rate swaps to convert a portion of our unsecured long-term borrowings into floating-rate obligations to manage our exposure to interest rates. See Note 16 to the consolidated financial statements for further information about our unsecured long-term borrowings.

Shareholders' Equity. Shareholders' equity is a stable and perpetual source of funding. See Note 19 to the consolidated financial statements for further information about our shareholders' equity.

Equity Capital Management and Regulatory Capital

Capital adequacy is of critical importance to us. We have in place a comprehensive capital management policy that provides a framework, defines objectives and establishes guidelines to assist us in maintaining the appropriate level and composition of capital in both business-as-usual and stressed conditions.

Equity Capital Management

We determine the appropriate amount and composition of our equity capital by considering multiple factors, including our current and future regulatory capital requirements, the results of our capital planning and stress testing process, the results of resolution capital models and other factors, such as rating agency guidelines, subsidiary capital requirements, the business environment and conditions in the financial markets.

We manage our capital requirements and the levels of our capital usage principally by setting limits on balance sheet assets and/or limits on risk, in each case at both the firmwide and business levels.

We principally manage the level and composition of our equity capital through issuances and repurchases of our common stock. We may also, from time to time, issue or repurchase our preferred stock, junior subordinated debt issued to trusts, and other subordinated debt or other forms of capital as business conditions warrant. Prior to any repurchases, we must receive confirmation that the Board of Governors of the Federal Reserve System (FRB) does not object to such capital action. See Notes 16 and 19 to the consolidated financial statements for further information about our preferred stock, junior subordinated debt issued to trusts and other subordinated debt.

Capital Planning and Stress Testing Process. As part of capital planning, we project sources and uses of capital given a range of business environments, including stressed conditions. Our stress testing process is designed to identify and measure material risks associated with our business activities, including market risk, credit risk and operational risk, as well as our ability to generate revenues.

The following is a description of our capital planning and stress testing process:

- **Capital Planning.** Our capital planning process incorporates an internal capital adequacy assessment with the objective of ensuring that we are appropriately capitalized relative to the risks in our businesses. We incorporate stress scenarios into our capital planning process with a goal of holding sufficient capital to ensure we remain adequately capitalized after experiencing a severe stress event. Our assessment of capital adequacy is viewed in tandem with our assessment of liquidity adequacy and is integrated into our overall risk management structure, governance and policy framework.

  Our capital planning process also includes an internal risk-based capital assessment. This assessment incorporates market risk, credit risk and operational risk. Market risk is calculated by using Value-at-Risk (VaR) calculations supplemented by risk-based add-ons which include risks related to rare events (tail risks). Credit risk utilizes assumptions about our counterparties' probability of default and the size of our losses in the event of a default. Operational risk is calculated based on scenarios incorporating multiple types of operational failures, as well as considering internal and external actual loss experience. Backtesting for market risk and credit risk is used to gauge the effectiveness of models at capturing and measuring relevant risks.

- **Stress Testing.** Our stress tests incorporate our internally designed stress scenarios, including our internally developed severely adverse scenario, and those required under CCAR and DFAST, and are designed to capture our specific vulnerabilities and risks. We provide further information about our stress test processes and a summary of the results on our website as described in "Business — Available Information" in Part I, Item 1 of this Form 10-K.

As required by the FRB's annual CCAR rules, we submit a capital plan for review by the FRB. The purpose of the FRB's review is to ensure that we have a robust, forward-looking capital planning process that accounts for our unique risks and that permits continued operation during times of economic and financial stress.

The FRB evaluates us based, in part, on whether we have the capital necessary to continue operating under the baseline and stress scenarios provided by the FRB and those developed internally. This evaluation also takes into account our process for identifying risk, our controls and governance for capital planning, and our guidelines for making capital planning decisions. In addition, the FRB evaluates our plan to make capital distributions (i.e., dividend payments and repurchases or redemptions of stock, subordinated debt or other capital securities) and issue capital, across the range of macroeconomic scenarios and firm-specific assumptions.

In addition, the DFAST rules currently require us to conduct stress tests on a semi-annual basis and publish a summary of results. The FRB also conducts its own annual stress tests and publishes a summary of certain results.

With respect to our 2018 CCAR submission, the FRB informed us that it did not object to our capital plan, conditioned upon us returning not more than $6.30 billion of capital from the third quarter of 2018 through the second quarter of 2019. The capital plan provides for up to $5.00 billion in repurchases of outstanding common stock and $1.30 billion in total common stock dividends, including an increase in our common stock dividend of $0.05 from $0.80 to $0.85 per share in the second quarter of 2019, subject to the approval by the Board of Directors of Group Inc. (Board). The amount and timing of our capital actions will be based on, among other things, our current and projected capital position, and capital deployment opportunities. We published a summary of our annual DFAST results in June 2018. See "Business — Available Information" in Part I, Item 1 of this Form 10-K.

In October 2018, we submitted our semi-annual DFAST results to the FRB and published a summary of the results of our internally developed severely adverse scenario. See "Business — Available Information" in Part I, Item 1 of this Form 10-K.

In addition, GS Bank USA submitted its 2018 annual DFAST results to the FRB in April 2018 and published a summary of its annual DFAST results in June 2018. GS Bank USA will not be required to conduct the annual company-run stress test in 2019. See "Business — Available Information" in Part I, Item 1 of this Form 10-K.

Goldman Sachs International (GSI) and GSIB also have their own capital planning and stress testing process, which incorporates internally designed stress tests and those required under the Prudential Regulation Authority's (PRA) Internal Capital Adequacy Assessment Process.

Contingency Capital Plan. As part of our comprehensive capital management policy, we maintain a contingency capital plan. Our contingency capital plan provides a framework for analyzing and responding to a perceived or actual capital deficiency, including, but not limited to, identification of drivers of a capital deficiency, as well as mitigants and potential actions. It outlines the appropriate communication procedures to follow during a crisis period, including internal dissemination of information, as well as timely communication with external stakeholders.

Capital Attribution. We assess each of our businesses' capital usage based upon our internal assessment of risks, which incorporates an attribution of all of our relevant regulatory capital requirements. These regulatory capital requirements are allocated using our attributed equity framework, which takes into consideration our most binding capital constraints. Our most binding capital constraint is based on the results of the FRB's annual stress test scenarios which include the Standardized risk-based capital and leverage ratios.

We also attribute risk-weighted assets (RWAs) to our business segments. As of December 2018, approximately 60% of RWAs calculated in accordance with the Standardized Capital Rules and approximately 50% of RWAs calculated in accordance with the Basel III Advanced Rules, were attributed to our Institutional Client Services segment and substantially all of the remaining RWAs were attributed to our Investing & Lending segment. We manage the levels of our capital usage based upon balance sheet and risk limits, as well as capital return analyses of our businesses based on our capital attribution.

Share Repurchase Program. We use our share repurchase program to help maintain the appropriate level of common equity. The repurchase program is effected primarily through regular open-market purchases (which may include repurchase plans designed to comply with Rule 10b5-1), the amounts and timing of which are determined primarily by our current and projected capital position and our capital plan submitted to the FRB as part of CCAR. The amounts and timing of the repurchases may also be influenced by general market conditions and the prevailing price and trading volumes of our common stock.

As of December 2018, the remaining share authorization under our existing repurchase program was 33.7 million shares; however, we are only permitted to make repurchases to the extent that such repurchases have not been objected to by the FRB. See "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" in Part II, Item 5 of this Form 10-K and Note 19 to the consolidated financial statements for further information about our share repurchase program, and see above for information about our capital planning and stress testing process.

Resolution Capital Models. In connection with our resolution planning efforts, we have established a Resolution Capital Adequacy and Positioning framework, which is designed to ensure that our major subsidiaries (GS Bank USA, Goldman Sachs & Co. LLC (GS&Co.), GSI, GSIB, Goldman Sachs Japan Co., Ltd. (GSJCL), Goldman Sachs Asset Management, L.P. and Goldman Sachs Asset Management International (GSAMI)) have access to sufficient loss-absorbing capacity (in the form of equity, subordinated debt and unsecured senior debt) so that they are able to wind-down following a Group Inc. bankruptcy filing in accordance with our preferred resolution strategy.

In addition, we have established a triggers and alerts framework, which is designed to provide the Board with information needed to make an informed decision on whether and when to commence bankruptcy proceedings for Group Inc.

Rating Agency Guidelines

The credit rating agencies assign credit ratings to the obligations of Group Inc., which directly issues or guarantees substantially all of our senior unsecured debt obligations. GS&Co. and GSI have been assigned long- and short-term issuer ratings by certain credit rating agencies. GS Bank USA and GSIB have also been assigned long- and short-term issuer ratings, as well as ratings on their long- and short-term bank deposits. In addition, credit rating agencies have assigned ratings to debt obligations of certain other subsidiaries of Group Inc.

The level and composition of our equity capital are among the many factors considered in determining our credit ratings. Each agency has its own definition of eligible capital and methodology for evaluating capital adequacy, and assessments are generally based on a combination of factors rather than a single calculation. See "Risk Management — Liquidity Risk Management — Credit Ratings" for further information about credit ratings of Group Inc., GS Bank USA, GSIB, GS&Co. and GSI.

Consolidated Regulatory Capital

We are subject to consolidated regulatory capital requirements which are calculated in accordance with the regulations of the FRB (Capital Framework). Under the Capital Framework, we are an "Advanced approach" banking organization and have been designated as a global systemically important bank (G-SIB).

The Capital Framework includes risk-based capital buffers that phased in ratably and became fully effective on January 1, 2019. The minimum risk-based capital ratios applicable to us as of January 2019 reflected the fully phased-in capital conservation buffer of 2.5% and the countercyclical capital buffer, if any, determined by the FRB. In addition, the fully phased-in G-SIB buffer applicable to us as of January 2019 is 2.5% based on 2017 financial data. The G-SIB buffer applicable to us as of January 2020 is 2.5% based on 2018 financial data. The G-SIB and countercyclical buffers in the future may differ due to additional guidance from our regulators and/or positional changes.

See Note 20 to the consolidated financial statements for further information about our risk-based capital ratios and leverage ratios, and the Capital Framework.

Subsidiary Capital Requirements

Many of our subsidiaries, including our bank and broker-dealer subsidiaries, are subject to separate regulation and capital requirements of the jurisdictions in which they operate.

Bank Subsidiaries. GS Bank USA is our primary U.S. banking subsidiary and GSIB is our primary non-U.S. banking subsidiary. These entities are subject to regulatory capital requirements.

See Note 20 to the consolidated financial statements for further information about the regulatory capital requirements of our bank subsidiaries.

U.S. Regulated Broker-Dealer Subsidiaries. GS&Co. is our primary U.S. regulated broker-dealer subsidiary and is subject to regulatory capital requirements, including those imposed by the SEC and the Financial Industry Regulatory Authority, Inc. In addition, GS&Co. is a registered futures commission merchant and is subject to regulatory capital requirements imposed by the CFTC, the Chicago Mercantile Exchange and the National Futures Association. Rule 15c3-1 of the SEC and Rule 1.17 of the CFTC specify uniform minimum net capital requirements, as defined, for their registrants, and also effectively require that a significant part of the registrants' assets be kept in relatively liquid form. GS&Co. has elected to calculate its minimum capital requirements in accordance with the "Alternative Net Capital Requirement" as permitted by Rule 15c3-1.

GS&Co. had regulatory net capital, as defined by Rule 15c3-1, of $17.45 billion as of December 2018 and $15.57 billion as of December 2017, which exceeded the amount required by $15.00 billion as of December 2018 and $13.15 billion as of December 2017. In addition to its alternative minimum net capital requirements, GS&Co. is also required to hold tentative net capital in excess of $1 billion and net capital in excess of $500 million in accordance with the market and credit risk standards of Appendix E of Rule 15c3-1. GS&Co. is also required to notify the SEC in the event that its tentative net capital is less than $5 billion. As of both December 2018 and December 2017, GS&Co. had tentative net capital and net capital in excess of both the minimum and the notification requirements.

Non-U.S. Regulated Broker-Dealer Subsidiaries. Our principal non-U.S. regulated broker-dealer subsidiaries include GSI and GSJCL.

GSI, our U.K. broker-dealer, is regulated by the PRA and the Financial Conduct Authority (FCA). GSI is subject to the capital framework for E.U.-regulated financial institutions prescribed in the E.U. Fourth Capital Requirements Directive and the E.U. Capital Requirements Regulation (CRR). These capital regulations are largely based on Basel III.

The table below presents information about GSI's risk-based capital ratios and minimum ratios.

	As of December	
$ in millions	**2018**	2017
Risk-based capital and RWAs		
CET1	**$ 23,956**	$ 24,871
Tier 1 capital	**$ 32,256**	$ 30,671
Tier 2 capital	**$ 5,377**	$ 5,377
Total capital	**$ 37,633**	$ 36,048
RWAs	**$200,089**	$225,942
Risk-based capital ratios		
CET1 ratio	**12.0%**	11.0%
Tier 1 capital ratio	**16.1%**	13.6%
Total capital ratio	**18.8%**	16.0%
Risk-based minimum ratios		
CET1 ratio	**8.1%**	7.2%
Tier 1 capital ratio	**10.1%**	9.1%
Total capital ratio	**12.7%**	11.8%

In the table above:

- CET1, Tier 1 capital and Total capital as of December 2018 included amounts which will be finalized upon the issuance of GSI's 2018 annual audited financial statements and contributed approximately 114 basis points to the risk-based capital ratios.
- The minimum risk-based capital ratios incorporate capital guidance received from the PRA and could change in the future. GSI's future capital requirements may also be impacted by developments such as the introduction of risk-based capital buffers.

In November 2016, the European Commission proposed amendments to the CRR to implement a 3% minimum leverage ratio requirement for certain E.U. financial institutions. This leverage ratio compares the CRR's definition of Tier 1 capital to a measure of leverage exposure, defined as the sum of certain assets plus certain off-balance-sheet exposures (which include a measure of derivatives, securities financing transactions, commitments and guarantees), less Tier 1 capital deductions. Any required minimum leverage ratio is expected to become effective for GSI no earlier than January 1, 2021. GSI had a leverage ratio of 4.4% as of December 2018 and 4.1% as of December 2017. Tier 1 capital as of December 2018 included amounts which will be finalized upon the issuance of GSI's 2018 annual audited financial statements and these amounts contributed approximately 31 basis points to the leverage ratio. This leverage ratio is based on our current interpretation and understanding of this rule and may evolve as we discuss the interpretation and application of this rule with GSI's regulators.

GSJCL, our Japanese broker-dealer, is regulated by Japan's Financial Services Agency. GSJCL and certain other non-U.S. subsidiaries are also subject to capital adequacy requirements promulgated by authorities of the countries in which they operate. As of both December 2018 and December 2017, these subsidiaries were in compliance with their local capital adequacy requirements.

Regulatory Matters and Other Developments

Regulatory Matters

Our businesses are subject to significant and evolving regulation. The Dodd-Frank Act, enacted in July 2010, significantly altered the financial regulatory regime within which we operate. In addition, other reforms have been adopted or are being considered by regulators and policy makers worldwide. Given that many of the new and proposed rules are highly complex, the full impact of regulatory reform will not be known until the rules are implemented and market practices develop under the final regulations.

See "Business — Regulation" in Part I, Item 1 of this Form 10-K for further information about the laws, rules and regulations and proposed laws, rules and regulations that apply to us and our operations.

Resolution and Recovery Plans. We are required by the FRB and the FDIC to submit a periodic plan that describes our strategy for a rapid and orderly resolution in the event of material financial distress or failure (resolution plan). We are also required by the FRB to submit a periodic recovery plan that outlines the steps that management could take to reduce risk, maintain sufficient liquidity, and conserve capital in times of prolonged stress.

In December 2017, the FRB and the FDIC provided feedback on our 2017 resolution plan and determined that it satisfactorily addressed the shortcomings identified in our prior submissions. The FRB and the FDIC did not identify deficiencies in our 2017 resolution plan, but the FRB and the FDIC did note one shortcoming that must be addressed in our next resolution plan submission. Our next resolution plan is due on July 1, 2019. In December 2018, the FRB and FDIC finalized guidance for Resolution Plan submissions which consolidated or superseded all prior guidance. See "Business — Available Information" in Part I, Item 1 of this Form 10-K.

In addition, GS Bank USA is required to submit periodic resolution plans to the FDIC. GS Bank USA's 2018 resolution plan was submitted on June 28, 2018. In August 2018, the FDIC extended the next resolution plan filing deadline to no sooner than July 1, 2020.

TLAC. In December 2016, the FRB adopted a final rule, establishing new TLAC and related requirements for U.S. BHCs designated as G-SIBs. The rule became effective in January 2019, with no phase-in period. Failure to comply with the TLAC requirements could result in restrictions being imposed by the FRB and could limit our ability to distribute capital, including share repurchases and dividend payments, and to make certain discretionary compensation payments.

The table below presents information about our TLAC and external long-term debt ratios.

$ in millions	TLAC and External Long-Term Debt
As of December 2018	
TLAC	**$ 254,836**
External long-term debt	**$ 160,493**
RWAs	**$ 558,111**
Leverage exposure	**$1,342,906**
TLAC to RWAs	**45.7%**
TLAC to leverage exposure	**19.0%**
External long-term debt to RWAs	**28.8%**
External long-term debt to leverage exposure	**12.0%**
As of January 2019	
Minimum TLAC to RWAs	**22.0%**
Minimum TLAC to leverage exposure	**9.5%**
Minimum external long-term debt to RWAs	**8.5%**
Minimum external long-term debt to leverage exposure	**4.5%**

In the table above:

- TLAC includes common and preferred stock, and eligible long-term debt issued by Group Inc. Eligible long-term debt represents unsecured debt, which has a remaining maturity of at least one year and satisfies additional requirements.
- External long-term debt consists of eligible long-term debt subject to a haircut if it is due to be paid between one and two years.
- RWAs represent Basel III Advanced RWAs. In accordance with the TLAC rules, the higher of Basel III Advanced or Standardized RWAs are used in the calculation of TLAC and external long-term debt ratios.
- Leverage exposure consists of average adjusted total assets and certain off-balance-sheet exposures.

See "Business — Regulation" in Part I, Item 1 of this Form 10-K for further information about TLAC.

Other Developments

Brexit. In March 2017, the U.K. government commenced the formal proceedings to end the U.K.'s membership in the E.U. There is a two year window during which the terms of the U.K.'s exit from the E.U. may be negotiated. This period expires on March 29, 2019.

The E.U. and the U.K. had negotiated a withdrawal agreement which both the U.K. and the E.U. Parliaments must ratify (the Withdrawal Agreement). The U.K. Parliament has not yet approved the Withdrawal Agreement. As a result, there is a possibility that the U.K. will leave the E.U. on March 29, 2019 without any transitional arrangements in place and firms based in the U.K. will lose their existing access arrangements to the E.U. markets; such a scenario is referred to as a "hard" Brexit.

We have been preparing for anticipated outcomes, including a hard Brexit, with the goal of ensuring that we maintain access to E.U. markets and are able to continue to provide products and services to our E.U. clients. In order for us to continue to serve our E.U. clients, clients may need to face an entity within one of the remaining E.U. member states, unless national laws in the applicable member state permit cross-border services from non-E.U. entities (for example, based on specific licenses or exemptions).

Our plan to manage a hard Brexit scenario involves transition of certain activities to new and/or different legal entities; working with clients and counterparties to redocument transactions so they face one of our E.U. legal entities; changes to our infrastructure; obtaining and developing new real estate; and, in some cases, moving our people to offices in the E.U.

In a hard Brexit scenario or as otherwise necessary, our plan is to service our E.U. client base in the following manner:

- Our German bank subsidiary, Goldman Sachs Bank Europe SE (GSBE), will act as our main operating subsidiary in the E.U. and will assume certain functions that can no longer be efficiently and effectively performed by our U.K. operating subsidiaries, including GSI, GSIB and GSAMI.
- Consistent with our global approach of being closer to our clients, we are also setting up branches of GSBE in a number of jurisdictions in the E.U. to enable Investment Banking, Institutional Client Services and PWM investment personnel to be situated in our offices in those countries.
- We have received approval from the German financial regulator, BaFin, for a licensed investment firm, Goldman Sachs Europe SE, which will be able to conduct certain activities (such as activities related to physical commodities and related products) that GSBE may be prevented from undertaking.
- In order to service our Investment Management business, we have received approval from the Irish Financial Regulator, the Central Bank of Ireland, for a Collective Investment Fund and Alternative Investment Fund Manager in Ireland, to replace the similar existing London-based Alternative Investment Fund Manager, which will lose its E.U. passport post-Brexit.
- A large portion of our Institutional Client Services and Investment Banking clients are classified as professionals or eligible counterparties in specific jurisdictions and may choose to continue being serviced by, and to continue to transact with, the U.K. service providers and entities under domestic arrangements provided by individual member states (licenses or exemptions). We expect to continue providing products and services in this manner to the extent that clients prefer such coverage and it is available. This would mean those clients who choose to do so in certain jurisdictions could continue to face GSI.
- We are also in the process of opening accounts to enable clients to transact with GSBE and/or Goldman Sachs Europe SE, as applicable.
- The internal infrastructure build-out and external connectivity to Financial Market Infrastructure required for the new E.U. entities continues to progress, with substantial elements already in place. GSBE has connected to settlement and clearing systems and is testing exchange connectivity.

- GSBE has been assigned a credit rating of A/F1 by Fitch, Inc. (Fitch), A1/P-1 by Moody's Investors Service (Moody's) and A+/A-1 by Standard & Poor's Ratings Services (S&P), which are consistent with those issued to GSI.
- Headcount in our E.U. offices has increased over the course of last year, with several hundred roles expected to transition into the E.U. under our current planning assumptions.
- We have secured and are developing additional real estate capacity in Frankfurt, Stockholm, Milan and Dublin.

Replacement of Interbank Offered Rates (IBORs), including LIBOR. Central banks and regulators in a number of major jurisdictions (for example, U.S., U.K., E.U., Switzerland and Japan) have convened working groups to find, and implement the transition to, suitable replacements for IBORs. The U.K. FCA, which regulates LIBOR, has announced that it will not compel panel banks to contribute to LIBOR after 2021. The E.U. Benchmarks Regulation imposed conditions under which only compliant benchmarks may be used in new contracts after 2021.

Market-led working groups in major jurisdictions, noted above, have already selected their preferred alternative risk-free reference rates and have published and will continue to publish consultations on issues, including methodologies for fallback provisions in contracts and financial instruments linked to IBORs and the development of term structures for alternative risk-free reference rates, which will be critical for financial markets to transition to the use of alternative risk-free reference rates in place of IBORs.

We have exposure to IBORs, including in financial instruments and contracts that mature after 2021. Our exposures arise from securities and loans we hold for investment or in connection with market-making activities, as well as derivatives we enter into to make markets for our clients and hedge our risks. We also have exposure to IBORs in the floating-rate securities and other funding products we issue.

The markets for alternative risk-free reference rates are developing and as they develop we expect to transition to these alternative risk-free reference rates.

We are seeking to facilitate an orderly transition from IBORs to alternative risk-free reference rates for us and our clients. Accordingly, we have created a program that focuses on:

- Evaluating and monitoring the impacts across our businesses, including transactions and products;
- Identifying and evaluating the scope of existing financial instruments and contracts that may be affected, and the extent to which those financial instruments and contracts already contain appropriate fallback language or would require amendment, either through bilateral negotiation or using industry-wide tools, such as protocols;
- Enhancements to infrastructure (for example, models and systems) to prepare for a smooth transition to alternative risk-free reference rates;
- Active participation in central bank and sector working groups, including responding to industry consultations; and
- Client education and communication.

As part of this program, we have sought to systematically identify the risks inherent in this transition, including financial risks (for example, earnings volatility under stress due to widening swap spreads and the loss of funding sources as a result of counterparties' reluctance to participate in transitioning their positions) and nonfinancial risks (for example, the inability to negotiate fallbacks with clients and/or counterparties and operational impediments to the transition). We are engaged with a range of industry and regulatory working groups (for example, ISDA, the Bank of England's Working Group on Sterling Risk Free Reference Rates and the Federal Reserve's Alternative Reference Rates Committee) and will continue to engage with our clients and counterparties to facilitate an orderly transition to alternative risk-free reference rates.

Off-Balance-Sheet Arrangements and Contractual Obligations

Off-Balance-Sheet Arrangements

In the ordinary course of business, we enter into various types of off-balance-sheet arrangements. Our involvement in these arrangements can take many different forms, including:

- Purchasing or retaining residual and other interests in special purpose entities such as mortgage-backed and other asset-backed securitization vehicles;
- Holding senior and subordinated debt, interests in limited and general partnerships, and preferred and common stock in other nonconsolidated vehicles;
- Entering into interest rate, foreign currency, equity, commodity and credit derivatives, including total return swaps;
- Entering into operating leases; and
- Providing guarantees, indemnifications, commitments, letters of credit and representations and warranties.

We enter into these arrangements for a variety of business purposes, including securitizations. The securitization vehicles that purchase mortgages, corporate bonds, and other types of financial assets are critical to the functioning of several significant investor markets, including the mortgage-backed and other asset-backed securities markets, since they offer investors access to specific cash flows and risks created through the securitization process.

We also enter into these arrangements to underwrite client securitization transactions; provide secondary market liquidity; make investments in performing and nonperforming debt, distressed loans, power-related assets, equity securities, real estate and other assets; provide investors with credit-linked and asset-repackaged notes; and receive or provide letters of credit to satisfy margin requirements and to facilitate the clearance and settlement process.

The table below presents where information about various off-balance-sheet arrangements may be found in this Form 10-K. In addition, see Note 3 to the consolidated financial statements for information about our consolidation policies.

Type of Off-Balance-Sheet Arrangement	Disclosure in Form 10-K
Variable interests and other obligations, including contingent obligations, arising from variable interests in nonconsolidated variable interest entities (VIEs)	See Note 12 to the consolidated financial statements.
Leases	See "Contractual Obligations" and Note 18 to the consolidated financial statements.
Guarantees, letters of credit, and lending and other commitments	See Note 18 to the consolidated financial statements.
Derivatives	See "Risk Management — Credit Risk Management — Credit Exposures — OTC Derivatives" and Notes 4, 5, 7 and 18 to the consolidated financial statements.

Contractual Obligations

We have certain contractual obligations which require us to make future cash payments. These contractual obligations include our time deposits, secured long-term financings, unsecured long-term borrowings, contractual interest payments and minimum rental payments under noncancelable leases.

Our obligations to make future cash payments also include our commitments and guarantees related to off-balance-sheet arrangements, which are excluded from the table below. See Note 18 to the consolidated financial statements for further information about such commitments and guarantees.

Due to the uncertainty of the timing and amounts that will ultimately be paid, our liability for unrecognized tax benefits has been excluded from the table below. See Note 24 to the consolidated financial statements for further information about our unrecognized tax benefits.

The table below presents contractual obligations by type.

	As of December	
$ in millions	**2018**	2017
Time deposits	**$ 28,413**	$ 30,075
Secured long-term financings	**$ 11,878**	$ 9,892
Unsecured long-term borrowings	**$224,149**	$217,687
Contractual interest payments	**$ 54,594**	$ 54,489
Minimum rental payments	**$ 2,399**	$ 1,964

The table below presents contractual obligations by expiration.

	As of December 2018			
$ in millions	**2019**	**2020 - 2021**	**2022 - 2023**	**2024 - Thereafter**
Time deposits	**$ –**	**$13,822**	**$ 9,828**	**$ 4,763**
Secured long-term financings	**$ –**	**$ 5,711**	**$ 3,163**	**$ 3,004**
Unsecured long-term borrowings	**$ –**	**$52,335**	**$ 51,331**	**$120,483**
Contractual interest payments	**$6,695**	**$12,015**	**$ 8,568**	**$ 27,316**
Minimum rental payments	**$ 281**	**$ 489**	**$ 319**	**$ 1,310**

In the table above:

- Obligations maturing within one year of our financial statement date or redeemable within one year of our financial statement date at the option of the holders are excluded as they are treated as short-term obligations. See Note 15 to the consolidated financial statements for further information about our short-term borrowings.
- Obligations that are repayable prior to maturity at our option are reflected at their contractual maturity dates and obligations that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.
- As of December 2018, unsecured long-term borrowings had maturities extending through 2067, consisted principally of senior borrowings, and included $4.24 billion of adjustments to the carrying value of certain unsecured long-term borrowings resulting from the application of hedge accounting. See Note 16 to the consolidated financial statements for further information about our unsecured long-term borrowings.
- As of December 2018, the difference between the aggregate contractual principal amount and the related fair value of long-term other secured financings for which the fair value option was elected was not material.
- As of December 2018, the aggregate contractual principal amount of unsecured long-term borrowings for which the fair value option was elected exceeded the related fair value by $2.38 billion.

- Contractual interest payments represents estimated future interest payments related to unsecured long-term borrowings, secured long-term financings and time deposits based on applicable interest rates as of December 2018, and includes stated coupons, if any, on structured notes.
- Future minimum rental payments are net of minimum sublease rentals under noncancelable leases. These lease commitments for office space expire on various dates through 2069. Certain agreements are subject to periodic escalation provisions for increases in real estate taxes and other charges. See Note 18 to the consolidated financial statements for further information about our leases.

Risk Management

Risks are inherent in our businesses and include liquidity, market, credit, operational, model, legal, compliance, conduct, regulatory and reputational risks. For further information about our risk management processes, see "Overview and Structure of Risk Management." Our risks include the risks across our risk categories, regions or global businesses, as well as those which have uncertain outcomes and have the potential to materially impact our financial results, our liquidity and our reputation. For further information about our areas of risk, see "Liquidity Risk Management," "Market Risk Management," "Credit Risk Management," "Operational Risk Management" and "Model Risk Management" and "Risk Factors" in Part I, Item 1A of this Form 10-K.

Overview and Structure of Risk Management

Overview

We believe that effective risk management is critical to our success. Accordingly, we have established an enterprise risk management framework that employs a comprehensive, integrated approach to risk management, and is designed to enable comprehensive risk management processes through which we identify, assess, monitor and manage the risks we assume in conducting our activities. These risks include liquidity, market, credit, operational, model, legal, compliance, conduct, regulatory and reputational risk exposures. Our risk management structure is built around three core components: governance, processes and people.

Governance. Risk management governance starts with the Board, which both directly and through its committees, including its Risk Committee, oversees our risk management policies and practices implemented through the enterprise risk management framework. The Board is also responsible for the annual review and approval of our risk appetite statement. The risk appetite statement describes the levels and types of risk we are willing to accept or to avoid, in order to achieve our strategic business objectives, while remaining in compliance with regulatory requirements.

The Board receives regular briefings on firmwide risks, including liquidity risk, market risk, credit risk, operational risk and model risk from our independent risk oversight and control functions, including the chief risk officer, and on compliance risk and conduct risk from the head of Compliance, on legal and regulatory matters from the general counsel, and on other matters impacting our reputation from the chair of our Firmwide Client and Business Standards Committee and our Firmwide Reputational Risk Committee. The chief risk officer reports to our chief executive officer and to the Risk Committee of the Board. As part of the review of the firmwide risk portfolio, the chief risk officer regularly advises the Risk Committee of the Board of relevant risk metrics and material exposures, including risk limits and thresholds established in our risk appetite statement.

The Enterprise Risk Management department, which reports to our chief risk officer, oversees the implementation of our risk governance structure and core risk management processes and is responsible for ensuring that our enterprise risk management framework provides the Board, our risk committees and senior management with a consistent and integrated approach to managing our various risks in a manner consistent with our risk appetite.

Our revenue-producing units, as well as Treasury, Operations and Technology, are our first line of defense and are accountable for the outcomes of our risk-generating activities, as well as for assessing and managing those risks within our risk appetite.

Our independent risk oversight and control functions are considered our second line of defense and provide independent assessment, oversight and challenge of the risks taken by our first line of defense, as well as lead and participate in risk-oriented committees. Independent risk oversight and control functions include Compliance, Conflicts Resolution, Controllers, Credit Risk Management, Enterprise Risk Management, Human Capital Management, Legal, Liquidity Risk Management, Market Risk Management, Model Risk Management, Operational Risk Management and Tax.

Internal Audit is considered our third line of defense and reports to our chief executive officer and the Audit Committee of the Board. Internal Audit includes professionals with a broad range of audit and industry experience, including risk management expertise. Internal Audit is responsible for independently assessing and validating the effectiveness of key controls, including those within the risk management framework, and providing timely reporting to the Audit Committee of the Board, senior management and regulators.

The three lines of defense structure promotes the accountability of first line risk takers, provides a framework for effective challenge by the second line and empowers independent review from the third line.

Our governance structure provides the protocol and responsibility for decision-making on risk management issues and ensures implementation of those decisions. We make extensive use of risk-related committees that meet regularly and serve as an important means to facilitate and foster ongoing discussions to manage and mitigate risks.

We maintain strong communication about risk and we have a culture of collaboration in decision-making among our first and second lines of defense, committees and senior management. While our first line of defense is responsible for management of their risk, we dedicate extensive resources to our second line of defense in order to ensure a strong oversight structure and an appropriate segregation of duties. We regularly reinforce our strong culture of escalation and accountability across all functions.

Processes. We maintain various processes that are critical components of our risk management framework, including identifying, assessing, monitoring and limiting our risks.

To effectively assess and monitor our risks, we maintain a daily discipline of marking substantially all of our inventory to current market levels. We carry our inventory at fair value, with changes in valuation reflected immediately in our risk management systems and in net revenues. We do so because we believe this discipline is one of the most effective tools for assessing and managing risk and that it provides transparent and realistic insight into our inventory exposures.

We also apply a rigorous framework of limits and thresholds to control and monitor risk across transactions, products, businesses and markets. The Board, directly or indirectly through its Risk Committee, approves limits and thresholds included in our risk appetite statement at firmwide, business and product levels. In addition, the Firmwide Enterprise Risk Committee is responsible for approving our risk limits framework, subject to the overall limits approved by the Risk Committee of the Board, at a variety of levels and monitoring these limits on a daily basis. The Risk Governance Committee is responsible for approving limits at firmwide, business and product levels. Certain limits may be set at levels that will require periodic adjustment, rather than at levels that reflect our maximum risk appetite. This fosters an ongoing dialogue about risk among our first and second lines of defense, committees and senior management, as well as rapid escalation of risk-related matters. See "Liquidity Risk Management," "Market Risk Management," "Credit Risk Management" and "Operational Risk Management" for further information.

Active management of our positions is another important process. Proactive mitigation of our market and credit exposures minimizes the risk that we will be required to take outsized actions during periods of stress.

Effective risk reporting and risk decision-making depends on our ability to get the right information to the right people at the right time. As such, we focus on the rigor and effectiveness of our risk systems, with the objective of ensuring that our risk management technology systems are comprehensive, reliable and timely. We devote significant time and resources to our risk management technology to ensure that it consistently provides us with complete, accurate and timely information.

People. Even the best technology serves only as a tool for helping to make informed decisions in real time about the risks we are taking. Ultimately, effective risk management requires our people to interpret our risk data on an ongoing and timely basis and adjust risk positions accordingly. The experience of our professionals, and their understanding of the nuances and limitations of each risk measure, guides us in assessing exposures and maintaining them within prudent levels.

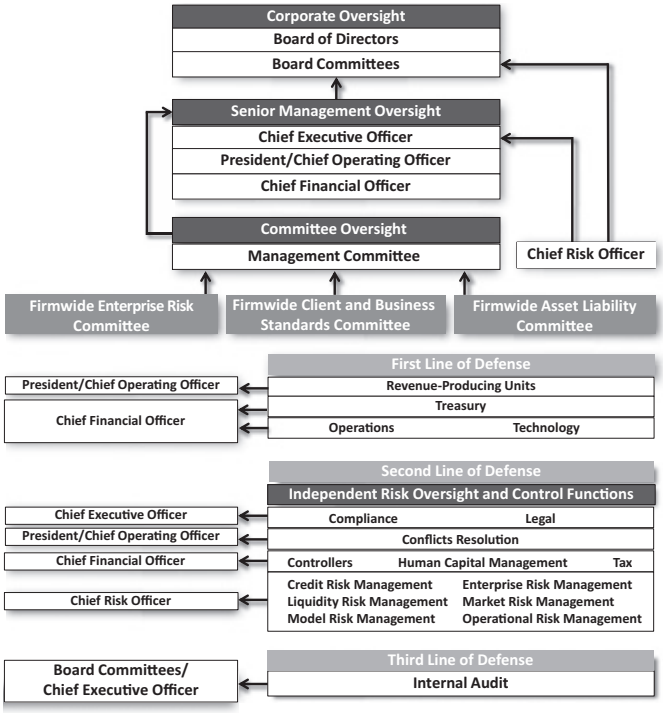
We reinforce a culture of effective risk management, consistent with our risk appetite, in our training and development programs, as well as in the way we evaluate performance, and recognize and reward our people. Our training and development programs, including certain sessions led by our most senior leaders, are focused on the importance of risk management, client relationships and reputational excellence. As part of our annual performance review process, we assess reputational excellence, including how an employee exercises good risk management and reputational judgment, and adheres to our code of conduct and compliance policies. Our review and reward processes are designed to communicate and reinforce to our professionals the link between behavior and how people are recognized, the need to focus on our clients and our reputation, and the need to always act in accordance with our highest standards.

Structure

Ultimate oversight of risk is the responsibility of our Board. The Board oversees risk both directly and through its committees, including its Risk Committee. We have a series of committees with specific risk management mandates that have oversight or decision-making responsibilities for risk management activities. Committee membership generally consists of senior managers from both our first and second lines of defense. We have established procedures for these committees to ensure that appropriate information barriers are in place. Our primary risk committees, most of which also have additional sub-committees or working groups, are described below. In addition to these committees, we have other risk-oriented committees that provide oversight for different businesses, activities, products, regions and entities. All of our committees have responsibility for considering the impact of transactions and activities, which they oversee, on our reputation.

Membership of our risk committees is reviewed regularly and updated to reflect changes in the responsibilities of the committee members. Accordingly, the length of time that members serve on the respective committees varies as determined by the committee chairs and based on the responsibilities of the members.

The chart below presents an overview of our risk management governance structure, our three lines of defense and our reporting relationships.



Management Committee. The Management Committee oversees our global activities. It provides this oversight directly and through authority delegated to committees it has established. This committee consists of our most senior leaders, and is chaired by our chief executive officer. Most members of the Management Committee are also members of other committees. The following are the committees that are principally involved in firmwide risk management.

Firmwide Enterprise Risk Committee. The Firmwide Enterprise Risk Committee is responsible for the ongoing review, approval and monitoring of the enterprise risk management framework and for providing oversight of our aggregate financial and nonfinancial risks. As a part of such oversight, the committee is responsible for the ongoing approval and monitoring of our risk limits framework at the firmwide, business and product levels. This committee is co-chaired by our chief financial officer and our chief risk officer, who are appointed as chairs by our chief executive officer, and reports to the Management Committee. The following are the primary committees that report to the Firmwide Enterprise Risk Committee:

- **Firmwide Risk Committee.** The Firmwide Risk Committee is globally responsible for the ongoing monitoring of relevant financial risks and related risk limits at the firmwide, business and product levels. This committee is co-chaired by the chairs of the Firmwide Enterprise Risk Committee.
- **Firmwide New Activity Committee.** The Firmwide New Activity Committee is responsible for reviewing new activities and for establishing a process to identify and review previously approved activities that are significant and that have changed in complexity and/or structure or present different reputational and suitability concerns over time to consider whether these activities remain appropriate. This committee is co-chaired by the head of regulatory controllers and the co-head of Europe, Middle East and Africa FICC sales, who are appointed as chairs by the chairs of the Firmwide Enterprise Risk Committee.
- **Firmwide Model Risk Control Committee.** The Firmwide Model Risk Control Committee is responsible for oversight of the development and implementation of model risk controls, which includes governance, policies and procedures related to our reliance on financial models. This committee is chaired by our deputy chief risk officer, who is appointed as chair by the chairs of the Firmwide Enterprise Risk Committee.

- **Firmwide Conduct and Operational Risk Committee.** The Firmwide Conduct and Operational Risk Committee is globally responsible for the ongoing approval and monitoring of the frameworks, policies, parameters and limits which govern our conduct and operational risks. This committee is co-chaired by a managing director in Global Compliance and our deputy chief risk officer, who are appointed as chairs by the chairs of the Firmwide Enterprise Risk Committee.
- **Firmwide Technology Risk Committee.** The Firmwide Technology Risk Committee reviews matters related to the design, development, deployment and use of technology. This committee oversees cyber security matters, as well as technology risk management frameworks and methodologies, and monitors their effectiveness. This committee is co-chaired by our chief information officer and the head of Global Investment Research, who are appointed as chairs by the chairs of the Firmwide Enterprise Risk Committee.
- **Global Business Resilience Committee.** The Global Business Resilience Committee is responsible for oversight of business resilience initiatives, promoting increased levels of security and resilience, and reviewing certain operating risks related to business resilience. This committee is chaired by our chief administrative officer, who is appointed as chair by the chairs of the Firmwide Enterprise Risk Committee.
- **Risk Governance Committee.** The Risk Governance Committee (through delegated authority from the Firmwide Enterprise Risk Committee) is globally responsible for the ongoing approval and monitoring of risk frameworks, policies, parameters and limits, at firmwide, business and product levels. In addition, this committee reviews the results of stress tests and scenario analyses. This committee is chaired by our chief risk officer, who is appointed as chair by the chairs of the Firmwide Enterprise Risk Committee.
- **Firmwide Volcker Oversight Committee.** The Firmwide Volcker Oversight Committee is responsible for the oversight and periodic review of the implementation of our Volcker Rule compliance program, as approved by the Board, and other Volcker Rule-related matters. This committee is co-chaired by the head of Market Risk Management and the deputy head of Compliance, who are appointed as chairs by the chairs of the Firmwide Enterprise Risk Committee.

Firmwide Client and Business Standards Committee. The Firmwide Client and Business Standards Committee assesses and makes determinations regarding relationships with our clients, client service and experience, and related business standards and reputational risk. This committee is chaired by our president and chief operating officer, who is appointed as chair by the chief executive officer, and reports to the Management Committee. This committee periodically provides updates to, and receives guidance from, the Public Responsibilities Committee of the Board.

The following committees report jointly to the Firmwide Enterprise Risk Committee and the Firmwide Client and Business Standards Committee:

- **Firmwide Reputational Risk Committee.** The Firmwide Reputational Risk Committee is responsible for assessing reputational risks arising from transactions that have been identified as having potential heightened reputational risk pursuant to the criteria established by the Firmwide Reputational Risk Committee. This committee is chaired by our president and chief operating officer, and the vice-chairs are the head of Compliance and the head of Conflicts Resolution, who are appointed as vice-chairs by the chair of the Firmwide Reputational Risk Committee.
- **Firmwide Suitability Committee.** The Firmwide Suitability Committee is responsible for setting standards and policies for product, transaction and client suitability and providing a forum for consistency across functions, regions and products on suitability assessments. This committee also reviews suitability matters escalated from other committees. This committee is co-chaired by the deputy head of Compliance, and the co-head of Europe, Middle East and Africa FICC sales, who are appointed as chairs by the chair of the Firmwide Client and Business Standards Committee.
- **Firmwide Investment Policy Committee.** The Firmwide Investment Policy Committee reviews, approves, sets policies, and provides oversight for certain illiquid principal investments, including review of risk management and controls for these types of investments. This committee is co-chaired by the head of our Merchant Banking Division and the head of the Special Situations Group, who are appointed as chairs by our president and chief operating officer and our chief financial officer.

- **Firmwide Capital Committee.** The Firmwide Capital Committee provides approval and oversight of debt-related transactions, including principal commitments of our capital. This committee aims to ensure that business, reputational and suitability standards for underwritings and capital commitments are maintained on a global basis. This committee is co-chaired by the head of Credit Risk Management and a co-head of the Financing Group, who are appointed as chairs by the chairs of the Firmwide Enterprise Risk Committee.
- **Firmwide Commitments Committee.** The Firmwide Commitments Committee reviews our underwriting and distribution activities with respect to equity and equity-related product offerings, and sets and maintains policies and procedures designed to ensure that legal, reputational, regulatory and business standards are maintained on a global basis. In addition to reviewing specific transactions, this committee periodically conducts general strategic reviews of sectors and products and establishes policies in connection with transaction practices. This committee is co-chaired by the co-head of the Industrials Group in our Investment Banking Division, an advisory director and a managing director in Risk Management, who are appointed as chairs by the chair of the Firmwide Client and Business Standards Committee.

Firmwide Asset Liability Committee. The Firmwide Asset Liability Committee reviews and approves the strategic direction for our financial resources, including capital, liquidity, funding and balance sheet. This committee has oversight responsibility for asset liability management, including interest rate and currency risk, funds transfer pricing, capital allocation and incentives, and credit ratings. This committee makes recommendations as to any adjustments to asset liability management and financial resource allocation in light of current events, risks, exposures, and regulatory requirements and approves related policies. This committee is co-chaired by our chief financial officer and our global treasurer, who are appointed as chairs by our chief executive officer, and reports to the Management Committee.

Conflicts Management

Conflicts of interest and our approach to dealing with them are fundamental to our client relationships, our reputation and our long-term success. The term "conflict of interest" does not have a universally accepted meaning, and conflicts can arise in many forms within a business or between businesses. The responsibility for identifying potential conflicts, as well as complying with our policies and procedures, is shared by all of our employees.

We have a multilayered approach to resolving conflicts and addressing reputational risk. Our senior management oversees policies related to conflicts resolution, and, in conjunction with Conflicts Resolution, Legal and Compliance, the Firmwide Client and Business Standards Committee, and other internal committees, formulates policies, standards and principles, and assists in making judgments regarding the appropriate resolution of particular conflicts. Resolving potential conflicts necessarily depends on the facts and circumstances of a particular situation and the application of experienced and informed judgment.

As a general matter, Conflicts Resolution reviews financing and advisory assignments in Investment Banking and certain of our investing, lending and other activities. In addition, we have various transaction oversight committees, such as the Firmwide Capital, Commitments and Suitability Committees and other committees that also review new underwritings, loans, investments and structured products. These groups and committees work with internal and external counsel and Compliance to evaluate and address any actual or potential conflicts. Conflicts Resolution reports to our president and chief operating officer.

We regularly assess our policies and procedures that address conflicts of interest in an effort to conduct our business in accordance with the highest ethical standards and in compliance with all applicable laws, rules and regulations.

Liquidity Risk Management

Overview

Liquidity risk is the risk that we will be unable to fund ourselves or meet our liquidity needs in the event of firm-specific, broader industry or market liquidity stress events. We have in place a comprehensive and conservative set of liquidity and funding policies. Our principal objective is to be able to fund ourselves and to enable our core businesses to continue to serve clients and generate revenues, even under adverse circumstances.

Treasury, which reports to our chief financial officer, has primary responsibility for developing, managing and executing our liquidity and funding strategy within our risk appetite.

Liquidity Risk Management, which is independent of our revenue-producing units and Treasury, and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing our liquidity risk through firmwide oversight across our global businesses and the establishment of stress testing and limits frameworks.

Liquidity Risk Management Principles

We manage liquidity risk according to three principles: (i) hold sufficient excess liquidity in the form of GCLA to cover outflows during a stressed period, (ii) maintain appropriate Asset-Liability Management and (iii) maintain a viable Contingency Funding Plan.

GCLA. GCLA is liquidity that we maintain to meet a broad range of potential cash outflows and collateral needs in a stressed environment. A primary liquidity principle is to pre-fund our estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. We believe that the securities held in our GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of resale agreements, and that this cash would allow us to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

Our GCLA reflects the following principles:

- The first days or weeks of a liquidity crisis are the most critical to a company's survival;
- Focus must be maintained on all potential cash and collateral outflows, not just disruptions to financing flows. Our businesses are diverse, and our liquidity needs are determined by many factors, including market movements, collateral requirements and client commitments, all of which can change dramatically in a difficult funding environment;
- During a liquidity crisis, credit-sensitive funding, including unsecured debt, certain deposits and some types of secured financing agreements, may be unavailable, and the terms (e.g., interest rates, collateral provisions and tenor) or availability of other types of secured financing may change and certain deposits may be withdrawn; and
- As a result of our policy to pre-fund liquidity that we estimate may be needed in a crisis, we hold more unencumbered securities and have larger debt balances than our businesses would otherwise require. We believe that our liquidity is stronger with greater balances of highly liquid unencumbered securities, even though it increases our total assets and our funding costs.

We maintain our GCLA across Group Inc., Goldman Sachs Funding LLC (Funding IHC) and Group Inc.'s major broker-dealer and bank subsidiaries, asset types, and clearing agents to provide us with sufficient operating liquidity to ensure timely settlement in all major markets, even in a difficult funding environment. In addition to the GCLA, we maintain cash balances and securities in several of our other entities, primarily for use in specific currencies, entities or jurisdictions where we do not have immediate access to parent company liquidity.

We believe that our GCLA provides us with a resilient source of funds that would be available in advance of potential cash and collateral outflows and gives us significant flexibility in managing through a difficult funding environment.

Asset-Liability Management. Our liquidity risk management policies are designed to ensure we have a sufficient amount of financing, even when funding markets experience persistent stress. We manage the maturities and diversity of our funding across markets, products and counterparties, and seek to maintain a diversified funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of our assets.

Our approach to asset-liability management includes:

- Conservatively managing the overall characteristics of our funding book, with a focus on maintaining long-term, diversified sources of funding in excess of our current requirements. See "Balance Sheet and Funding Sources — Funding Sources" for further information;

- Actively managing and monitoring our asset base, with particular focus on the liquidity, holding period and our ability to fund assets on a secured basis. We assess our funding requirements and our ability to liquidate assets in a stressed environment while appropriately managing risk. This enables us to determine the most appropriate funding products and tenors. See "Balance Sheet and Funding Sources — Balance Sheet Management" for further information about our balance sheet management process and "— Funding Sources — Secured Funding" for further information about asset classes that may be harder to fund on a secured basis; and
- Raising secured and unsecured financing that has a long tenor relative to the liquidity profile of our assets. This reduces the risk that our liabilities will come due in advance of our ability to generate liquidity from the sale of our assets. Because we maintain a highly liquid balance sheet, the holding period of certain of our assets may be materially shorter than their contractual maturity dates.

Our goal is to ensure that we maintain sufficient liquidity to fund our assets and meet our contractual and contingent obligations in normal times, as well as during periods of market stress. Through our dynamic balance sheet management process, we use actual and projected asset balances to determine secured and unsecured funding requirements. Funding plans are reviewed and approved by the Firmwide Asset Liability Committee. In addition, our independent risk oversight and control functions analyze, and the Firmwide Asset Liability Committee reviews, our consolidated total capital position (unsecured long-term borrowings plus total shareholders' equity) so that we maintain a level of long-term funding that is sufficient to meet our long-term financing requirements. In a liquidity crisis, we would first use our GCLA in order to avoid reliance on asset sales (other than our GCLA). However, we recognize that orderly asset sales may be prudent or necessary in a severe or persistent liquidity crisis.

Subsidiary Funding Policies

The majority of our unsecured funding is raised by Group Inc., which lends the necessary funds to Funding IHC and other subsidiaries, some of which are regulated, to meet their asset financing, liquidity and capital requirements. In addition, Group Inc. provides its regulated subsidiaries with the necessary capital to meet their regulatory requirements. The benefits of this approach to subsidiary funding are enhanced control and greater flexibility to meet the funding requirements of our subsidiaries. Funding is also raised at the subsidiary level through a variety of products, including deposits, secured funding and unsecured borrowings.

Our intercompany funding policies assume that a subsidiary's funds or securities are not freely available to its parent, Funding IHC or other subsidiaries unless (i) legally provided for and (ii) there are no additional regulatory, tax or other restrictions. In particular, many of our subsidiaries are subject to laws that authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to Group Inc. or Funding IHC. Regulatory action of that kind could impede access to funds that Group Inc. needs to make payments on its obligations. Accordingly, we assume that the capital provided to our regulated subsidiaries is not available to Group Inc. or other subsidiaries and any other financing provided to our regulated subsidiaries is not available to Group Inc. or Funding IHC until the maturity of such financing.

Group Inc. has provided substantial amounts of equity and subordinated indebtedness, directly or indirectly, to its regulated subsidiaries. For example, as of December 2018, Group Inc. had $29.05 billion of equity and subordinated indebtedness invested in GS&Co., its principal U.S. registered broker-dealer; $39.69 billion invested in GSI, a regulated U.K. broker-dealer; $2.76 billion invested in GSJCL, a regulated Japanese broker-dealer; $31.98 billion invested in GS Bank USA, a regulated New York State-chartered bank; and $3.93 billion invested in GSIB, a regulated U.K. bank. Group Inc. also provided, directly or indirectly, $114.38 billion of unsubordinated loans (including secured loans of $28.72 billion), and $18.09 billion of collateral and cash deposits to these entities, substantially all of which was to GS&Co., GSI, GSJCL and GS Bank USA, as of December 2018. In addition, as of December 2018, Group Inc. had significant amounts of capital invested in and loans to its other regulated subsidiaries.

Contingency Funding Plan. We maintain a contingency funding plan to provide a framework for analyzing and responding to a liquidity crisis situation or periods of market stress. Our contingency funding plan outlines a list of potential risk factors, key reports and metrics that are reviewed on an ongoing basis to assist in assessing the severity of, and managing through, a liquidity crisis and/or market dislocation. The contingency funding plan also describes in detail our potential responses if our assessments indicate that we have entered a liquidity crisis, which include pre-funding for what we estimate will be our potential cash and collateral needs, as well as utilizing secondary sources of liquidity. Mitigants and action items to address specific risks which may arise are also described and assigned to individuals responsible for execution.

The contingency funding plan identifies key groups of individuals to foster effective coordination, control and distribution of information, all of which are critical in the management of a crisis or period of market stress. The contingency funding plan also provides information about the responsibilities of these groups and individuals, which include making and disseminating key decisions, coordinating all contingency activities throughout the duration of the crisis or period of market stress, implementing liquidity maintenance activities and managing internal and external communication.

Stress Tests

In order to determine the appropriate size of our GCLA, we use an internal liquidity model, referred to as the Modeled Liquidity Outflow, which captures and quantifies our liquidity risks. We also consider other factors, including, but not limited to, an assessment of our potential intraday liquidity needs through an additional internal liquidity model, referred to as the Intraday Liquidity Model, the results of our long-term stress testing models, our resolution liquidity models and other applicable regulatory requirements and a qualitative assessment of our condition, as well as the financial markets. The results of the Modeled Liquidity Outflow, the Intraday Liquidity Model, the long-term stress testing models and the resolution liquidity models are reported to senior management on a regular basis. We also perform stress tests that are designed to ensure a comprehensive analysis of our vulnerabilities and idiosyncratic risks combining financial and nonfinancial risks, including, but not limited to, credit, market, liquidity and funding, operational and compliance, strategic, systemic and emerging risks into a single combined scenario.

Modeled Liquidity Outflow. Our Modeled Liquidity Outflow is based on conducting multiple scenarios that include combinations of market-wide and firm-specific stress. These scenarios are characterized by the following qualitative elements:

- Severely challenged market environments, including low consumer and corporate confidence, financial and political instability, adverse changes in market values, including potential declines in equity markets and widening of credit spreads; and
- A firm-specific crisis potentially triggered by material losses, reputational damage, litigation, executive departure, and/or a ratings downgrade.

The following are key modeling elements of the Modeled Liquidity Outflow:

- Liquidity needs over a 30-day scenario;
- A two-notch downgrade of our long-term senior unsecured credit ratings;
- A combination of contractual outflows, such as upcoming maturities of unsecured debt, and contingent outflows (e.g., actions, though not contractually required, we may deem necessary in a crisis). We assume that most contingent outflows will occur within the initial days and weeks of a crisis;
- No issuance of equity or unsecured debt;
- No support from additional government funding facilities. Although we have access to various central bank funding programs, we do not assume reliance on additional sources of funding in a liquidity crisis; and
- No asset liquidation, other than the GCLA.

The potential contractual and contingent cash and collateral outflows covered in our Modeled Liquidity Outflow include:

Unsecured Funding

- Contractual: All upcoming maturities of unsecured long-term debt, commercial paper and other unsecured funding products. We assume that we will be unable to issue new unsecured debt or roll over any maturing debt.
- Contingent: Repurchases of our outstanding long-term debt, commercial paper and hybrid financial instruments in the ordinary course of business as a market maker.

Deposits

- Contractual: All upcoming maturities of term deposits. We assume that we will be unable to raise new term deposits or roll over any maturing term deposits.
- Contingent: Partial withdrawals of deposits that have no contractual maturity. The withdrawal assumptions reflect, among other factors, the type of deposit, whether the deposit is insured or uninsured, and our relationship with the depositor.

Secured Funding

- Contractual: A portion of upcoming contractual maturities of secured funding due to either the inability to refinance or the ability to refinance only at wider haircuts (i.e., on terms which require us to post additional collateral). Our assumptions reflect, among other factors, the quality of the underlying collateral, counterparty roll probabilities (our assessment of the counterparty's likelihood of continuing to provide funding on a secured basis at the maturity of the trade) and counterparty concentration.
- Contingent: Adverse changes in the value of financial assets pledged as collateral for financing transactions, which would necessitate additional collateral postings under those transactions.

OTC Derivatives

- Contingent: Collateral postings to counterparties due to adverse changes in the value of our OTC derivatives, excluding those that are cleared and settled through central counterparties (OTC-cleared).
- Contingent: Other outflows of cash or collateral related to OTC derivatives, excluding OTC-cleared, including the impact of trade terminations, collateral substitutions, collateral disputes, loss of rehypothecation rights, collateral calls or termination payments required by a two-notch downgrade in our credit ratings, and collateral that has not been called by counterparties, but is available to them.

Exchange-Traded and OTC-cleared Derivatives

- Contingent: Variation margin postings required due to adverse changes in the value of our outstanding exchange-traded and OTC-cleared derivatives.
- Contingent: An increase in initial margin and guaranty fund requirements by derivative clearing houses.

Customer Cash and Securities

- Contingent: Liquidity outflows associated with our prime brokerage business, including withdrawals of customer credit balances, and a reduction in customer short positions, which may serve as a funding source for long positions.

Securities

- Contingent: Liquidity outflows associated with a reduction or composition change in our short positions, which may serve as a funding source for long positions.

Unfunded Commitments

- Contingent: Draws on our unfunded commitments. Draw assumptions reflect, among other things, the type of commitment and counterparty.

Other

- Other upcoming large cash outflows, such as tax payments.

Intraday Liquidity Model. Our Intraday Liquidity Model measures our intraday liquidity needs using a scenario analysis characterized by the same qualitative elements as our Modeled Liquidity Outflow. The model assesses the risk of increased intraday liquidity requirements during a scenario where access to sources of intraday liquidity may become constrained.

The following are key modeling elements of the Intraday Liquidity Model:

- Liquidity needs over a one-day settlement period;
- Delays in receipt of counterparty cash payments;
- A reduction in the availability of intraday credit lines at our third-party clearing agents; and
- Higher settlement volumes due to an increase in activity.

Long-Term Stress Testing. We utilize longer-term stress tests to take a forward view on our liquidity position through prolonged stress periods in which we experience a severe liquidity stress and recover in an environment that continues to be challenging. We are focused on ensuring conservative asset-liability management to prepare for a prolonged period of potential stress, seeking to maintain a diversified funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of our assets.

We also perform stress tests on a regular basis as part of our routine risk management processes and conduct tailored stress tests on an ad hoc or product-specific basis in response to market developments.

Resolution Liquidity Models. In connection with our resolution planning efforts, we have established our Resolution Liquidity Adequacy and Positioning framework, which estimates liquidity needs of our major subsidiaries in a stressed environment. The liquidity needs are measured using our Modeled Liquidity Outflow assumptions and include certain additional inter-affiliate exposures. We have also established our Resolution Liquidity Execution Need framework, which measures the liquidity needs of our major subsidiaries to stabilize and wind-down following a Group Inc. bankruptcy filing in accordance with our preferred resolution strategy.

In addition, we have established a triggers and alerts framework, which is designed to provide the Board with information needed to make an informed decision on whether and when to commence bankruptcy proceedings for Group Inc.

Model Review and Validation

We regularly refine our Modeled Liquidity Outflow, Intraday Liquidity Model and our other stress testing models to reflect changes in market or economic conditions and our business mix. Any changes, including model assumptions, are approved by Liquidity Risk Management. Significant changes to these models are also approved by the Risk Governance Committee.

These models are independently reviewed, validated and approved by Model Risk Management. See "Model Risk Management" for further information.

Limits

We use liquidity limits at various levels and across liquidity risk types to manage the size of our liquidity exposures. Limits are measured relative to acceptable levels of risk given our liquidity risk tolerance. The purpose of the firmwide limits is to assist senior management in monitoring and controlling our overall liquidity profile.

The Risk Committee of the Board and the Risk Governance Committee approve liquidity risk limits at the firmwide level, consistent with our risk appetite statement. Limits are reviewed frequently and amended, with required approvals, on a permanent and temporary basis, as appropriate, to reflect changing market or business conditions.

Our liquidity risk limits are monitored by Treasury and Liquidity Risk Management. Liquidity Risk Management is responsible for identifying and escalating to senior management and/or the appropriate risk committee, on a timely basis, instances where limits have been exceeded.

GCLA and Unencumbered Metrics

GCLA. Based on the results of our internal liquidity risk models, described above, as well as our consideration of other factors, including, but not limited to, an assessment of our potential intraday liquidity needs and a qualitative assessment of our condition, as well as the financial markets, we believe our liquidity position as of both December 2018 and December 2017 was appropriate. We strictly limit our GCLA to a narrowly defined list of securities and cash because they are highly liquid, even in a difficult funding environment. We do not include other potential sources of excess liquidity in our GCLA, such as less liquid unencumbered securities or committed credit facilities.

The table below presents information about our average GCLA.

	Average for the Year Ended December	
$ in millions	**2018**	2017
Denomination		
U.S. dollar	**$155,348**	$155,020
Non-U.S. dollar	**77,995**	63,528
Total	**$233,343**	$218,548
Asset Class		
Overnight cash deposits	**$ 98,811**	$ 93,617
U.S. government obligations	**79,810**	75,108
U.S. agency obligations	**12,171**	11,813
Non-U.S. government obligations	**42,551**	38,010
Total	**$233,343**	$218,548
Entity Type		
Group Inc. and Funding IHC	**$ 40,920**	$ 37,507
Major broker-dealer subsidiaries	**104,364**	98,160
Major bank subsidiaries	**88,059**	82,881
Total	**$233,343**	$218,548

In the table above:

- The U.S. dollar-denominated GCLA consists of (i) unencumbered U.S. government and agency obligations (including highly liquid U.S. agency mortgage-backed obligations), all of which are eligible as collateral in Federal Reserve open market operations and (ii) certain overnight U.S. dollar cash deposits.
- The non-U.S. dollar-denominated GCLA consists of non-U.S. government obligations (only unencumbered German, French, Japanese and U.K. government obligations) and certain overnight cash deposits in highly liquid currencies.

We maintain our GCLA to enable us to meet current and potential liquidity requirements of our parent company, Group Inc., and its subsidiaries. Our Modeled Liquidity Outflow and Intraday Liquidity Model incorporate a consolidated requirement for Group Inc., as well as a standalone requirement for each of our major broker-dealer and bank subsidiaries. Funding IHC is required to provide the necessary liquidity to Group Inc. during the ordinary course of business, and is also obligated to provide capital and liquidity support to major subsidiaries in the event of our material financial distress or failure. Liquidity held directly in each of our major broker-dealer and bank subsidiaries is intended for use only by that subsidiary to meet its liquidity requirements and is assumed not to be available to Group Inc. or Funding IHC unless (i) legally provided for and (ii) there are no additional regulatory, tax or other restrictions. In addition, the Modeled Liquidity Outflow and Intraday Liquidity Model also incorporate a broader assessment of standalone liquidity requirements for other subsidiaries and we hold a portion of our GCLA directly at Group Inc. or Funding IHC to support such requirements.

Other Unencumbered Assets. In addition to our GCLA, we have a significant amount of other unencumbered cash and financial instruments, including other government obligations, high-grade money market securities, corporate obligations, marginable equities, loans and cash deposits not included in our GCLA. The fair value of our unencumbered assets averaged $177.08 billion for 2018 and $158.41 billion for 2017. We do not consider these assets liquid enough to be eligible for our GCLA.

Liquidity Regulatory Framework

As a BHC, we are subject to a minimum Liquidity Coverage Ratio (LCR) under the LCR rule approved by the U.S. federal bank regulatory agencies. The LCR rule requires organizations to maintain an adequate ratio of eligible high-quality liquid assets (HQLA) to expected net cash outflows under an acute short-term liquidity stress scenario. Eligible HQLA excludes HQLA held by subsidiaries that is in excess of their minimum requirement and is subject to transfer restrictions. We are required to maintain a minimum LCR of 100%. We expect that fluctuations in client activity, business mix and the market environment will impact our average LCR.

The table below presents information about our average daily LCR.

	Average for the Three Months Ended	
$ in millions	**December 2018**	September 2018
Total HQLA	**$226,473**	$233,721
Eligible HQLA	**$160,016**	$170,621
Net cash outflows	**$126,511**	$133,126
LCR	**127%**	128%

In addition, the U.S. federal bank regulatory agencies have issued a proposed rule that calls for a net stable funding ratio (NSFR) for large U.S. banking organizations. The proposal would require banking organizations to ensure they have access to stable funding over a one-year time horizon. The proposed rule includes quarterly disclosure of the ratio and a description of the banking organization's stable funding sources. The U.S. federal bank regulatory agencies have not released the final rule. We expect that we will be compliant with the NSFR requirement when it is effective.

The following is information about our subsidiary liquidity regulatory requirements:

- **GS Bank USA.** GS Bank USA is subject to a minimum LCR of 100% under the LCR rule approved by the U.S. federal bank regulatory agencies. As of December 2018, GS Bank USA's LCR exceeded the minimum requirement. The NSFR requirement described above would also apply to GS Bank USA.
- **GSI.** GSI is subject to a minimum LCR of 100% under the LCR rule approved by the U.K. regulatory authorities and the European Commission. GSI's average monthly LCR for the trailing twelve-month period ended December 2018 exceeded the minimum requirement.
- **Other Subsidiaries.** We monitor local regulatory liquidity requirements of our subsidiaries to ensure compliance. For many of our subsidiaries, these requirements either have changed or are likely to change in the future due to the implementation of the Basel Committee's framework for liquidity risk measurement, standards and monitoring, as well as other regulatory developments.

The implementation of these rules and any amendments adopted by the regulatory authorities, could impact our liquidity and funding requirements and practices in the future.

Credit Ratings

We rely on the short-term and long-term debt capital markets to fund a significant portion of our day-to-day operations and the cost and availability of debt financing is influenced by our credit ratings. Credit ratings are also important when we are competing in certain markets, such as OTC derivatives, and when we seek to engage in longer-term transactions. See "Risk Factors" in Part I, Item 1A of this Form 10-K for information about the risks associated with a reduction in our credit ratings.

The table below presents the unsecured credit ratings and outlook of Group Inc.

	As of December 2018				
	DBRS	Fitch	Moody's	R&I	S&P
Short-term debt	R-1 (middle)	F1	P-2	a-1	A-2
Long-term debt	A(high)	A	A3	A	BBB+
Subordinated debt	A	A-	Baa2	A-	BBB-
Trust preferred	A	BBB-	Baa3	N/A	BB
Preferred stock	BBB (high)	BB+	Ba1	N/A	BB
Ratings outlook	Stable	Stable	Stable	Stable	Stable

In the table above:

- The ratings and outlook are by DBRS, Inc. (DBRS), Fitch, Moody's, Rating and Investment Information, Inc. (R&I), and S&P.
- The ratings for trust preferred relate to the guaranteed preferred beneficial interests issued by Goldman Sachs Capital I.
- The DBRS, Fitch, Moody's and S&P ratings for preferred stock include the APEX issued by Goldman Sachs Capital II and Goldman Sachs Capital III.

The table below presents the unsecured credit ratings and outlook of GS Bank USA, GSIB, GS&Co. and GSI, by Fitch, Moody's and S&P.

	As of December 2018		
	Fitch	Moody's	S&P
GS Bank USA			
Short-term debt	F1	P-1	A-1
Long-term debt	A+	A1	A+
Short-term bank deposits	F1+	P-1	N/A
Long-term bank deposits	AA-	A1	N/A
Ratings outlook	Stable	Negative	Stable
GSIB			
Short-term debt	F1	P-1	A-1
Long-term debt	A	A1	A+
Short-term bank deposits	F1	P-1	N/A
Long-term bank deposits	A	A1	N/A
Ratings outlook	Stable	Negative	Stable
GS&Co.			
Short-term debt	F1	N/A	A-1
Long-term debt	A+	N/A	A+
Ratings outlook	Stable	N/A	Stable
GSI			
Short-term debt	F1	P-1	A-1
Long-term debt	A	A1	A+
Ratings outlook	Stable	Negative	Stable

We believe our credit ratings are primarily based on the credit rating agencies' assessment of:

- Our liquidity, market, credit and operational risk management practices;
- The level and variability of our earnings;
- Our capital base;
- Our franchise, reputation and management;
- Our corporate governance; and
- The external operating and economic environment, including, in some cases, the assumed level of government support or other systemic considerations, such as potential resolution.

Certain of our derivatives have been transacted under bilateral agreements with counterparties who may require us to post collateral or terminate the transactions based on changes in our credit ratings. We manage our GCLA to ensure we would, among other potential requirements, be able to make the additional collateral or termination payments that may be required in the event of a two-notch reduction in our long-term credit ratings, as well as collateral that has not been called by counterparties, but is available to them.

See Note 7 to the consolidated financial statements for further information about derivatives with credit-related contingent features and the additional collateral or termination payments related to our net derivative liabilities under bilateral agreements that could have been called by counterparties in the event of a one-notch and two-notch downgrade in our credit ratings.

Cash Flows

As a global financial institution, our cash flows are complex and bear little relation to our net earnings and net assets. Consequently, we believe that traditional cash flow analysis is less meaningful in evaluating our liquidity position than the liquidity and asset-liability management policies described above. Cash flow analysis may, however, be helpful in highlighting certain macro trends and strategic initiatives in our businesses.

Year Ended December 2018. Our cash and cash equivalents increased by $20.50 billion to $130.55 billion at the end of 2018, primarily due to net cash provided by financing activities and operating activities, partially offset by net cash used for investing activities. The net cash provided by financing activities primarily reflected increases in consumer deposits. The net cash provided by operating activities primarily reflected net earnings and a decrease in collateralized transactions, partially offset by an increase in financial instruments owned. The net cash used for investing activities was primarily to fund corporate and commercial real estate loans.

Year Ended December 2017. Our cash and cash equivalents decreased by $11.66 billion to $110.05 billion at the end of 2017. We used $18.23 billion in net cash for operating activities, reflecting a decrease in the net liability for receivables and payables due to client activity. We used $28.64 billion in net cash for investing activities, primarily to fund corporate and real estate loans, and investments in U.S. government and agency obligations accounted for as available-for-sale securities. We generated $35.21 billion in net cash from financing activities, primarily from net issuances of unsecured long-term borrowings and increases in institutional and consumer deposits, partially offset by repurchases of common stock.

Year Ended December 2016. Our cash and cash equivalents increased by $28.27 billion to $121.71 billion at the end of 2016. We generated $9.68 billion in net cash from investing activities, primarily from net cash acquired in business acquisitions. We generated $18.60 billion in net cash from financing activities and operating activities, primarily from increases in deposits and from net issuances of unsecured long-term borrowings, partially offset by repurchases of common stock.

Market Risk Management

Overview

Market risk is the risk of loss in the value of our inventory, as well as certain other financial assets and financial liabilities, due to changes in market conditions. We employ a variety of risk measures, each described in the respective sections below, to monitor market risk. We hold inventory primarily for market making for our clients and for our investing and lending activities. Our inventory, therefore, changes based on client demands and our investment opportunities. Our inventory is accounted for at fair value and therefore fluctuates on a daily basis, with the related gains and losses included in market making and other principal transactions. Categories of market risk include the following:

- Interest rate risk: results from exposures to changes in the level, slope and curvature of yield curves, the volatilities of interest rates, prepayment speeds and credit spreads;
- Equity price risk: results from exposures to changes in prices and volatilities of individual equities, baskets of equities and equity indices;
- Currency rate risk: results from exposures to changes in spot prices, forward prices and volatilities of currency rates; and
- Commodity price risk: results from exposures to changes in spot prices, forward prices and volatilities of commodities, such as crude oil, petroleum products, natural gas, electricity, and precious and base metals.

Market Risk Management, which is independent of our revenue-producing units and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing our market risk through firmwide oversight across our global businesses.

Managers in revenue-producing units and Market Risk Management discuss market information, positions and estimated loss scenarios on an ongoing basis. Managers in revenue-producing units are accountable for managing risk within prescribed limits. These managers have in-depth knowledge of their positions, markets and the instruments available to hedge their exposures.

Market Risk Management Process

Our process for managing market risk includes:

- Collecting complete, accurate and timely information;
- A dynamic limit-setting framework;
- Monitoring compliance with established market risk limits and reporting our exposures;
- Diversifying exposures;
- Controlling position sizes;
- Evaluating mitigants, such as economic hedges in related securities or derivatives; and
- Proactive communication between our revenue-producing units and our independent risk oversight and control functions.

Our market risk management systems enable us to perform an independent calculation of VaR and stress measures, capture risk measures at individual position levels, attribute risk measures to individual risk factors of each position, report many different views of the risk measures (e.g., by desk, business, product type or entity) and produce ad hoc analyses in a timely manner.

Risk Measures

Market Risk Management produces risk measures and monitors them against established market risk limits. These measures reflect an extensive range of scenarios and the results are aggregated at product, business and firmwide levels.

We use a variety of risk measures to estimate the size of potential losses for both moderate and more extreme market moves over both short-term and long-term time horizons. Our primary risk measures are VaR, which is used for shorter-term periods, and stress tests. Our risk reports detail key risks, drivers and changes for each desk and business, and are distributed daily to senior management of both our revenue-producing units and our independent risk oversight and control functions.

Value-at-Risk. VaR is the potential loss in value due to adverse market movements over a defined time horizon with a specified confidence level. For assets and liabilities included in VaR, see "Financial Statement Linkages to Market Risk Measures." We typically employ a one-day time horizon with a 95% confidence level. We use a single VaR model, which captures risks including interest rates, equity prices, currency rates and commodity prices. As such, VaR facilitates comparison across portfolios of different risk characteristics. VaR also captures the diversification of aggregated risk at the firmwide level.

We are aware of the inherent limitations to VaR and therefore use a variety of risk measures in our market risk management process. Inherent limitations to VaR include:

- VaR does not estimate potential losses over longer time horizons where moves may be extreme;
- VaR does not take account of the relative liquidity of different risk positions; and
- Previous moves in market risk factors may not produce accurate predictions of all future market moves.

To comprehensively capture our exposures and relevant risks in our VaR calculation, we use historical simulations with full valuation of market factors at the position level by simultaneously shocking the relevant market factors for that position. These market factors include spot prices, credit spreads, funding spreads, yield curves, volatility and correlation, and are updated periodically based on changes in the composition of positions, as well as variations in market conditions. We sample from five years of historical data to generate the scenarios for our VaR calculation. The historical data is weighted so that the relative importance of the data reduces over time. This gives greater importance to more recent observations and reflects current asset volatilities, which improves the accuracy of our estimates of potential loss. As a result, even if our positions included in VaR were unchanged, our VaR would increase with increasing market volatility and vice versa.

Given its reliance on historical data, VaR is most effective in estimating risk exposures in markets in which there are no sudden fundamental changes or shifts in market conditions.

Our VaR measure does not include:

- Positions that are best measured and monitored using sensitivity measures; and
- The impact of changes in counterparty and our own credit spreads on derivatives, as well as changes in our own credit spreads on financial liabilities for which the fair value option was elected.

We perform daily backtesting of our VaR model (i.e., comparing daily net revenues for positions included in VaR to the VaR measure calculated as of the prior business day) at the firmwide level and for each of our businesses and major regulated subsidiaries.

Stress Testing. Stress testing is a method of determining the effect of various hypothetical stress scenarios. We use stress testing to examine risks of specific portfolios, as well as the potential impact of our significant risk exposures. We use a variety of stress testing techniques to calculate the potential loss from a wide range of market moves on our portfolios, including sensitivity analysis, scenario analysis and stress tests. The results of our various stress tests are analyzed together for risk management purposes.

Sensitivity analysis is used to quantify the impact of a market move in a single risk factor across all positions (e.g., equity prices or credit spreads) using a variety of defined market shocks, ranging from those that could be expected over a one-day time horizon up to those that could take many months to occur. We also use sensitivity analysis to quantify the impact of the default of any single entity, which captures the risk of large or concentrated exposures.

Scenario analysis is used to quantify the impact of a specified event, including how the event impacts multiple risk factors simultaneously. For example, for sovereign stress testing we calculate potential direct exposure associated with our sovereign inventory, as well as the corresponding debt, equity and currency exposures associated with our non-sovereign inventory that may be impacted by the sovereign distress. When conducting scenario analysis, we typically consider a number of possible outcomes for each scenario, ranging from moderate to severely adverse market impacts. In addition, these stress tests are constructed using both historical events and forward-looking hypothetical scenarios.

Stress testing is designed to ensure a comprehensive analysis of our vulnerabilities and idiosyncratic risks combining financial and nonfinancial risks, including, but not limited to, market, credit, liquidity and funding, operational and compliance, strategic, systemic and emerging risks into a single combined scenario. Stress tests are primarily used to assess capital adequacy as part of our capital planning and stress testing process; however, stress testing is also integrated into our risk governance framework. This includes selecting appropriate scenarios to use for our capital planning and stress testing process. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" for further information.

Unlike VaR measures, which have an implied probability because they are calculated at a specified confidence level, there is generally no implied probability that our stress test scenarios will occur. Instead, stress tests are used to model both moderate and more extreme moves in underlying market factors. When estimating potential loss, we generally assume that our positions cannot be reduced or hedged (although experience demonstrates that we are generally able to do so).

Stress test scenarios are conducted on a regular basis as part of our routine risk management process and on an ad hoc basis in response to market events or concerns. Stress testing is an important part of our risk management process because it allows us to quantify our exposure to tail risks, highlight potential loss concentrations, undertake risk/reward analysis, and assess and mitigate our risk positions.

Limits

We use risk limits at various levels (including firmwide, business and product) to govern our risk appetite by controlling the size of our exposures to market risk. Limits are set based on VaR and on a range of stress tests relevant to our exposures. Limits are reviewed frequently and amended on a permanent or temporary basis to reflect changing market conditions, business conditions or tolerance for risk.

The Risk Committee of the Board and the Risk Governance Committee approve market risk limits and sub-limits at firmwide, business and product levels, consistent with our risk appetite statement. In addition, Market Risk Management (through delegated authority from the Risk Governance Committee) sets market risk limits and sub-limits at certain product and desk levels.

The purpose of the firmwide limits is to assist senior management in controlling our overall risk profile. Sub-limits are set below the approved level of risk limits. Sub-limits set the desired maximum amount of exposure that may be managed by any particular business on a day-to-day basis without additional levels of senior management approval, effectively leaving day-to-day decisions to individual desk managers and traders. Accordingly, sub-limits are a management tool designed to ensure appropriate escalation rather than to establish maximum risk tolerance. Sub-limits also distribute risk among various businesses in a manner that is consistent with their level of activity and client demand, taking into account the relative performance of each area.

Our market risk limits are monitored by Market Risk Management, which is responsible for identifying and escalating to senior management and/or the appropriate risk committee, on a timely basis, instances where limits have been exceeded. When a risk limit has been exceeded (e.g., due to positional changes or changes in market conditions, such as increased volatilities or changes in correlations), it is escalated to senior management and/or the appropriate risk committee. Such instances are remediated by an inventory reduction and/or a temporary or permanent increase to the risk limit.

Model Review and Validation

Our VaR and stress testing models are regularly reviewed by Market Risk Management and enhanced in order to incorporate changes in the composition of positions included in our market risk measures, as well as variations in market conditions. Prior to implementing significant changes to our assumptions and/or models, Model Risk Management performs model validations. Significant changes to our VaR and stress testing models are reviewed with our chief risk officer and chief financial officer, and approved by the Risk Governance Committee.

These models are independently reviewed, validated and approved by Model Risk Management. See "Model Risk Management" for further information.

Metrics

We analyze VaR at the firmwide level and a variety of more detailed levels, including by risk category, business and region. The tables below present average daily VaR and period-end VaR, as well as the high and low VaR for the period. Diversification effect in the tables below represents the difference between total VaR and the sum of the VaRs for the four risk categories. This effect arises because the four market risk categories are not perfectly correlated.

The table below presents average daily VaR by risk category.

	Year Ended December	
$ in millions	**2018**	2017
Interest rates	**$ 46**	$ 40
Equity prices	**31**	24
Currency rates	**14**	12
Commodity prices	**11**	13
Diversification effect	**(42)**	(35)
Total	**$ 60**	$ 54

Our average daily VaR increased to $60 million in 2018 from $54 million in 2017, primarily due to increases in the equity prices and interest rates categories, partially offset by an increase in the diversification effect. The overall increase was due to increased exposures and higher levels of volatility.

The table below presents period-end VaR by risk category.

	As of December	
$ in millions	**2018**	2017
Interest rates	**$ 46**	$ 48
Equity prices	**32**	31
Currency rates	**12**	7
Commodity prices	**11**	9
Diversification effect	**(44)**	(30)
Total	**$ 57**	$ 65

Our daily VaR decreased to $57 million as of December 2018 from $65 million as of December 2017, primarily due to an increase in the diversification effect, partially offset by an increase in the currency rates category. The overall decrease was primarily due to reduced exposures.

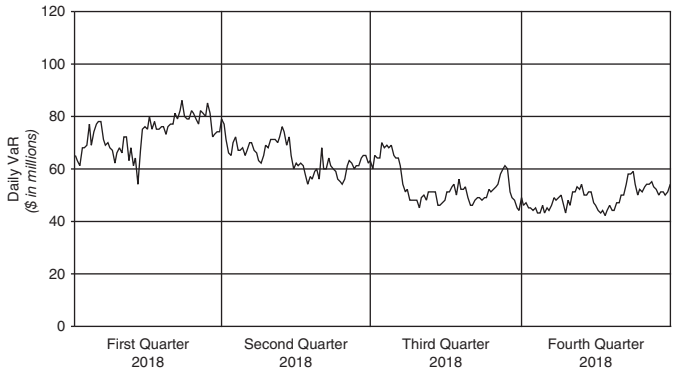
During 2018 and 2017, the firmwide VaR risk limit was not exceeded, raised or reduced.

The table below presents high and low VaR by risk category.

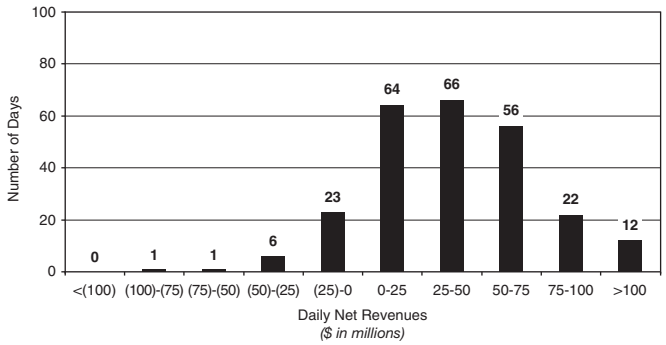
	Year Ended December 2018		Year Ended December 2017	
$ in millions	**High**	**Low**	High	Low
Interest rates	**$61**	**$34**	$57	$29
Equity prices	**$45**	**$24**	$38	$17
Currency rates	**$27**	**$ 7**	$28	$ 6
Commodity prices	**$17**	**$ 8**	$27	$ 7

The high total VaR was $86 million for both 2018 and 2017, and the low total VaR was $42 million for 2018 and $37 million for 2017.

The chart below presents daily VaR for 2018.



The chart below presents the frequency distribution of daily net revenues for positions included in VaR for 2018.



Daily net revenues for positions included in VaR are compared with VaR calculated as of the end of the prior business day. Net losses incurred on a single day for such positions exceeded our 95% one-day VaR (i.e., a VaR exception) on two occasions during 2018 and did not exceed our 95% one-day VaR during 2017.

During periods in which we have significantly more positive net revenue days than net revenue loss days, we expect to have fewer VaR exceptions because, under normal conditions, our business model generally produces positive net revenues. In periods in which our franchise revenues are adversely affected, we generally have more loss days, resulting in more VaR exceptions. The daily net revenues for positions included in VaR used to determine VaR exceptions reflect the impact of any intraday activity, including bid/offer net revenues, which are more likely than not to be positive by their nature.

Sensitivity Measures

Certain portfolios and individual positions are not included in VaR because VaR is not the most appropriate risk measure. Other sensitivity measures we use to analyze market risk are described below.

10% Sensitivity Measures. The table below presents market risk by asset category for positions accounted for at fair value, that are not included in VaR.

	As of December	
$ in millions	**2018**	2017
Equity	**$1,923**	$2,096
Debt	**1,890**	1,606
Total	**$3,813**	$3,702

In the table above:

- The market risk of these positions is determined by estimating the potential reduction in net revenues of a 10% decline in the value of these positions.
- Equity positions relate to private and restricted public equity securities, including interests in funds that invest in corporate equities and real estate and interests in hedge funds.
- Debt positions include interests in funds that invest in corporate mezzanine and senior debt instruments, loans backed by commercial and residential real estate, corporate bank loans and other corporate debt, including acquired portfolios of distressed loans.
- Funded equity and debt positions are included in our consolidated statements of financial condition in financial instruments owned. See Note 6 to the consolidated financial statements for further information about cash instruments.
- These measures do not reflect the diversification effect across asset categories or across other market risk measures.

Credit Spread Sensitivity on Derivatives and Financial Liabilities. VaR excludes the impact of changes in counterparty and our own credit spreads on derivatives, as well as changes in our own credit spreads (debt valuation adjustment) on financial liabilities for which the fair value option was elected. The estimated sensitivity to a one basis point increase in credit spreads (counterparty and our own) on derivatives was a gain of $3 million (including hedges) as of both December 2018 and December 2017. In addition, the estimated sensitivity to a one basis point increase in our own credit spreads on financial liabilities for which the fair value option was elected was a gain of $41 million as of December 2018 and $35 million as of December 2017. However, the actual net impact of a change in our own credit spreads is also affected by the liquidity, duration and convexity (as the sensitivity is not linear to changes in yields) of those financial liabilities for which the fair value option was elected, as well as the relative performance of any hedges undertaken.

Interest Rate Sensitivity. Loans receivable were $80.59 billion as of December 2018 and $65.93 billion as of December 2017, substantially all of which had floating interest rates. The estimated sensitivity to a 100 basis point increase in interest rates on such loans was $607 million as of December 2018 and $527 million as of December 2017, of additional interest income over a twelve-month period, which does not take into account the potential impact of an increase in costs to fund such loans. See Note 9 to the consolidated financial statements for further information about loans receivable.

Other Market Risk Considerations

As of both December 2018 and December 2017, we had commitments and held loans for which we have obtained credit loss protection from Sumitomo Mitsui Financial Group, Inc. See Note 18 to the consolidated financial statements for further information about such lending commitments.

In addition, we make investments in securities that are accounted for as available-for-sale and included in financial instruments owned in the consolidated statements of financial condition. See Note 6 to the consolidated financial statements for further information.

We also make investments accounted for under the equity method and we also make direct investments in real estate, both of which are included in other assets. Direct investments in real estate are accounted for at cost less accumulated depreciation. See Note 13 to the consolidated financial statements for further information about other assets.

Financial Statement Linkages to Market Risk Measures

We employ a variety of risk measures, each described in the respective sections above, to monitor market risk across the consolidated statements of financial condition and consolidated statements of earnings. The related gains and losses on these positions are included in market making, other principal transactions, interest income and interest expense in the consolidated statements of earnings, and debt valuation adjustment in the consolidated statements of comprehensive income.

The table below presents certain categories of assets and liabilities in the consolidated statements of financial condition and the market risk measures used to assess those assets and liabilities.

Categories in the Consolidated Statements of Financial Condition	Market Risk Measures
Collateralized agreements, at fair value	VaR
Receivables	VaR Interest Rate Sensitivity
Financial instruments owned	VaR 10% Sensitivity Measures Credit Spread Sensitivity — Derivatives
Deposits, at fair value	Credit Spread Sensitivity — Financial Liabilities
Collateralized financings, at fair value	VaR
Financial instruments sold, but not yet purchased	VaR Credit Spread Sensitivity — Derivatives
Unsecured short-term and long-term borrowings, at fair value	VaR Credit Spread Sensitivity — Financial Liabilities

Credit Risk Management

Overview

Credit risk represents the potential for loss due to the default or deterioration in credit quality of a counterparty (e.g., an OTC derivatives counterparty or a borrower) or an issuer of securities or other instruments we hold. Our exposure to credit risk comes mostly from client transactions in OTC derivatives and loans and lending commitments. Credit risk also comes from cash placed with banks, securities financing transactions (i.e., resale and repurchase agreements and securities borrowing and lending activities) and customer and other receivables.

Credit Risk Management, which is independent of our revenue-producing units and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing our credit risk through firmwide oversight across our global businesses. The Risk Governance Committee reviews and approves credit policies and parameters. In addition, we hold other positions that give rise to credit risk (e.g., bonds held in our inventory and secondary bank loans). These credit risks are captured as a component of market risk measures, which are monitored and managed by Market Risk Management, consistent with other inventory positions. We also enter into derivatives to manage market risk exposures. Such derivatives also give rise to credit risk, which is monitored and managed by Credit Risk Management.

Credit Risk Management Process

Our process for managing credit risk includes:

- Collecting complete, accurate and timely information;
- Approving transactions and setting and communicating credit exposure limits;
- Monitoring compliance with established credit risk limits and reporting our exposure;
- Establishing or approving underwriting standards;
- Assessing the likelihood that a counterparty will default on its payment obligations;
- Measuring our current and potential credit exposure and losses resulting from counterparty default;
- Using credit risk mitigants, including collateral and hedging;
- Maximizing recovery through active workout and restructuring of claims; and
- Proactive communication between our revenue-producing units and our independent risk oversight and control functions.

As part of the risk assessment process, Credit Risk Management performs credit reviews, which include initial and ongoing analyses of our counterparties. For substantially all of our credit exposures, the core of our process is an annual counterparty credit review. A credit review is an independent analysis of the capacity and willingness of a counterparty to meet its financial obligations, resulting in an internal credit rating. The determination of internal credit ratings also incorporates assumptions with respect to the nature of and outlook for the counterparty's industry, and the economic environment. Senior personnel within Credit Risk Management, with expertise in specific industries, inspect and approve credit reviews and internal credit ratings.

Our risk assessment process may also include, where applicable, reviewing certain key metrics, including, but not limited to, delinquency status, collateral values, Fair Isaac Corporation credit scores and other risk factors.

Our global credit risk management systems capture credit exposure to individual counterparties and on an aggregate basis to counterparties and their subsidiaries (economic groups). These systems also provide management with comprehensive information about our aggregate credit risk by product, internal credit rating, industry, country and region.

Risk Measures and Limits

We measure our credit risk based on the potential loss in the event of non-payment by a counterparty using current and potential exposure. For derivatives and securities financing transactions, current exposure represents the amount presently owed to us after taking into account applicable netting and collateral arrangements, while potential exposure represents our estimate of the future exposure that could arise over the life of a transaction based on market movements within a specified confidence level. Potential exposure also takes into account netting and collateral arrangements. For loans and lending commitments, the primary measure is a function of the notional amount of the position.

The Risk Committee of the Board and the Risk Governance Committee approve credit risk limits at firmwide, business and product levels, consistent with our risk appetite statement. Credit Risk Management (through delegated authority from the Risk Governance Committee) sets credit limits for individual counterparties, economic groups, industries and countries. Policies authorized by the Firmwide Enterprise Risk Committee and the Risk Governance Committee prescribe the level of formal approval required for us to assume credit exposure to a counterparty across all product areas, taking into account any applicable netting provisions, collateral or other credit risk mitigants.

We use credit limits at various levels (e.g., counterparty, economic group, industry and country), as well as underwriting standards to control the size and nature of our credit exposures. Limits for counterparties and economic groups are reviewed regularly and revised to reflect changing risk appetites for a given counterparty or group of counterparties. Limits for industries and countries are based on our risk appetite and are designed to allow for regular monitoring, review, escalation and management of credit risk concentrations.

Our credit risk limits are monitored by Credit Risk Management, which is responsible for identifying and escalating, on a timely basis, instances where limits have been exceeded. When a risk limit has been exceeded, it is escalated to senior management and/or the appropriate risk committee.

Stress Tests

We use regular stress tests to calculate the credit exposures, including potential concentrations that would result from applying shocks to counterparty credit ratings or credit risk factors (e.g., currency rates, interest rates, equity prices). These shocks include a wide range of moderate and more extreme market movements. Some of our stress tests include shocks to multiple risk factors, consistent with the occurrence of a severe market or economic event. In the case of sovereign default, we estimate the direct impact of the default on our sovereign credit exposures, changes to our credit exposures arising from potential market moves in response to the default, and the impact of credit market deterioration on corporate borrowers and counterparties that may result from the sovereign default. Unlike potential exposure, which is calculated within a specified confidence level, with a stress test there is generally no assumed probability of these events occurring.

We perform stress tests on a regular basis as part of our routine risk management processes and conduct tailored stress tests on an ad hoc basis in response to market developments. We also perform stress tests that are designed to ensure a comprehensive analysis of our vulnerabilities and idiosyncratic risks combining financial and nonfinancial risks, including, but not limited to, credit, market, liquidity and funding, operational and compliance, strategic, systemic and emerging risks into a single combined scenario.

Model Review and Validation

Our potential credit exposure and stress testing models, and any changes to such models or assumptions, are independently reviewed, validated and approved by Model Risk Management. See "Model Risk Management" for further information.

Risk Mitigants

To reduce our credit exposures on derivatives and securities financing transactions, we may enter into netting agreements with counterparties that permit us to offset receivables and payables with such counterparties. We may also reduce credit risk with counterparties by entering into agreements that enable us to obtain collateral from them on an upfront or contingent basis and/or to terminate transactions if the counterparty's credit rating falls below a specified level. We monitor the fair value of the collateral to ensure that our credit exposures are appropriately collateralized. We seek to minimize exposures where there is a significant positive correlation between the creditworthiness of our counterparties and the market value of collateral we receive.

For loans and lending commitments, depending on the credit quality of the borrower and other characteristics of the transaction, we employ a variety of potential risk mitigants. Risk mitigants include collateral provisions, guarantees, covenants, structural seniority of the bank loan claims and, for certain lending commitments, provisions in the legal documentation that allow us to adjust loan amounts, pricing, structure and other terms as market conditions change. The type and structure of risk mitigants employed can significantly influence the degree of credit risk involved in a loan or lending commitment.

When we do not have sufficient visibility into a counterparty's financial strength or when we believe a counterparty requires support from its parent, we may obtain third-party guarantees of the counterparty's obligations. We may also mitigate our credit risk using credit derivatives or participation agreements.

Credit Exposures

As of December 2018, our aggregate credit exposure increased as compared with December 2017, primarily reflecting an increase in cash deposits with central banks and loans and lending commitments, partially offset by a decrease in secured financing transactions. The percentage of our credit exposures arising from non-investment-grade counterparties (based on our internally determined public rating agency equivalents) increased as compared with December 2017, reflecting an increase in non-investment-grade loans and lending commitments. Our credit exposure to counterparties that defaulted during 2018 was lower as compared with our credit exposure to counterparties that defaulted during the prior year, and substantially all of such exposure was related to loans and lending commitments. Our credit exposure to counterparties that defaulted during 2018 remained low, representing less than 0.5% of our total credit exposure, and estimated losses compared with the prior year were lower and not material. Our credit exposures are described further below.

Cash and Cash Equivalents. Our credit exposure on cash and cash equivalents arises from our unrestricted cash, and includes both interest-bearing and non-interest-bearing deposits. To mitigate the risk of credit loss, we place substantially all of our deposits with highly rated banks and central banks.

The table below presents credit exposure from unrestricted cash and cash equivalents, and the concentration by industry, region and credit quality.

	As of December	
$ in millions	**2018**	2017
Cash and Cash Equivalents	**$107,408**	$91,609
Industry		
Financial Institutions	**16%**	17%
Sovereign	**84%**	83%
Total	**100%**	100%
Region		
Americas	**36%**	64%
Europe, Middle East and Africa	**41%**	22%
Asia	**23%**	14%
Total	**100%**	100%
Credit Quality (Credit Rating Equivalent)		
AAA	**62%**	72%
AA	**10%**	9%
A	**27%**	18%
BBB	**1%**	1%
Total	**100%**	100%

The table above excludes cash segregated for regulatory and other purposes of $23.14 billion as of December 2018 and $18.44 billion as of December 2017.

OTC Derivatives. Our credit exposure on OTC derivatives arises primarily from our market-making activities. As a market maker, we enter into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. We also enter into derivatives to manage market risk exposures. We manage our credit exposure on OTC derivatives using the credit risk process, measures, limits and risk mitigants described above.

We generally enter into OTC derivatives transactions under bilateral collateral arrangements that require the daily exchange of collateral. As credit risk is an essential component of fair value, we include a credit valuation adjustment (CVA) in the fair value of derivatives to reflect counterparty credit risk, as described in Note 7 to the consolidated financial statements. CVA is a function of the present value of expected exposure, the probability of counterparty default and the assumed recovery upon default.

The table below presents net credit exposure from OTC derivatives and the concentration by industry and region.

	As of December	
$ in millions	**2018**	2017
OTC derivative assets	**$ 40,576**	$ 45,036
Collateral (not netted under U.S. GAAP)	**(14,278)**	(15,422)
Net credit exposure	**$ 26,298**	$ 29,614
Industry		
Consumer, Retail & Healthcare	**2%**	3%
Diversified Industrials	**8%**	7%
Financial Institutions	**14%**	16%
Funds	**17%**	14%
Municipalities & Nonprofit	**7%**	8%
Natural Resources & Utilities	**13%**	14%
Sovereign	**25%**	24%
Technology, Media & Telecommunications	**7%**	7%
Other (including Special Purpose Vehicles)	**7%**	7%
Total	**100%**	100%
Region		
Americas	**35%**	41%
Europe, Middle East and Africa	**55%**	51%
Asia	**10%**	8%
Total	**100%**	100%

In the table above:

- OTC derivative assets, included in the consolidated statements of financial condition, are reported on a net-by-counterparty basis (i.e., the net receivable for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement (counterparty netting) and are accounted for at fair value, net of cash collateral received under enforceable credit support agreements (cash collateral netting).
- Collateral represents cash collateral and the fair value of securities collateral, primarily U.S. and non-U.S. government and agency obligations, received under credit support agreements, which management considers when determining credit risk, but such collateral is not eligible for netting under U.S. GAAP.

The table below presents the distribution of net credit exposure from OTC derivatives by tenor.

$ in millions	Investment-Grade	Non-Investment-Grade / Unrated	Total
As of December 2018			
Less than 1 year	**$ 15,697**	**$ 5,427**	**$ 21,124**
1 - 5 years	**21,300**	**4,091**	**25,391**
Greater than 5 years	**51,737**	**4,191**	**55,928**
Total	**88,734**	**13,709**	**102,443**
Netting	**(68,736)**	**(7,409)**	**(76,145)**
Net credit exposure	**$ 19,998**	**$ 6,300**	**$ 26,298**
As of December 2017			
Less than 1 year	$ 16,232	$ 4,854	$ 21,086
1 - 5 years	23,817	5,465	29,282
Greater than 5 years	62,103	4,441	66,544
Total	102,152	14,760	116,912
Netting	(79,786)	(7,512)	(87,298)
Net credit exposure	$ 22,366	$ 7,248	$ 29,614

In the table above:

- Tenor is based on remaining contractual maturity.
- Netting includes counterparty netting across tenor categories and cash and securities collateral that management considers when determining credit risk (including collateral that is not eligible for netting under U.S. GAAP). Counterparty netting within the same tenor category is included within such tenor category.

The tables below present the distribution of net credit exposure from OTC derivatives by tenor and internally determined public rating agency equivalents.

	Investment-Grade				
$ in millions	AAA	AA	A	BBB	Total
As of December 2018					
Less than 1 year	**$ 1,262**	**$ 2,506**	**$ 6,473**	**$ 5,456**	**$ 15,697**
1 - 5 years	**881**	**5,192**	**9,072**	**6,155**	**21,300**
Greater than 5 years	**9,202**	**3,028**	**21,415**	**18,092**	**51,737**
Total	**11,345**	**10,726**	**36,960**	**29,703**	**88,734**
Netting	**(6,444)**	**(7,107)**	**(32,390)**	**(22,795)**	**(68,736)**
Net credit exposure	**$ 4,901**	**$ 3,619**	**$ 4,570**	**$ 6,908**	**$ 19,998**
As of December 2017					
Less than 1 year	$ 663	$ 3,028	$ 7,806	$ 4,735	$ 16,232
1 - 5 years	1,231	4,770	11,975	5,841	23,817
Greater than 5 years	3,263	16,990	21,857	19,993	62,103
Total	5,157	24,788	41,638	30,569	102,152
Netting	(2,912)	(16,648)	(36,561)	(23,665)	(79,786)
Net credit exposure	$ 2,245	$ 8,140	$ 5,077	$ 6,904	$ 22,366

	Non-Investment-Grade / Unrated		
$ in millions	BB or lower	Unrated	Total
As of December 2018			
Less than 1 year	**$ 5,255**	**$ 172**	**$ 5,427**
1 - 5 years	**4,053**	**38**	**4,091**
Greater than 5 years	**4,138**	**53**	**4,191**
Total	**13,446**	**263**	**13,709**
Netting	**(7,339)**	**(70)**	**(7,409)**
Net credit exposure	**$ 6,107**	**$ 193**	**$ 6,300**
As of December 2017			
Less than 1 year	$ 4,603	$ 251	$ 4,854
1 - 5 years	5,458	7	5,465
Greater than 5 years	4,401	40	4,441
Total	14,462	298	14,760
Netting	(7,418)	(94)	(7,512)
Net credit exposure	$ 7,044	$ 204	$ 7,248

Lending Activities. We manage our lending activities using the credit risk process, measures, limits and risk mitigants described above. Other lending positions, including secondary trading positions, are risk-managed as a component of market risk.

- **Commercial Lending.** Our commercial lending activities include lending to investment-grade and non-investment-grade corporate borrowers. Loans and lending commitments associated with these activities are principally used for operating liquidity and general corporate purposes or in connection with contingent acquisitions. Corporate loans may be secured or unsecured, depending on the loan purpose, the risk profile of the borrower and other factors. Our commercial lending activities also include extending loans to borrowers that are secured by commercial and other real estate.

  The table below presents credit exposure from commercial loans and lending commitments, and the concentration by industry, region and credit quality.

	As of December	
$ in millions	**2018**	2017
Loans and Lending Commitments	**$200,823**	$198,012
Industry		
Consumer, Retail & Healthcare	**16%**	23%
Diversified Industrials	**16%**	13%
Financial Institutions	**9%**	7%
Funds	**4%**	3%
Natural Resources & Utilities	**15%**	14%
Real Estate	**10%**	12%
Technology, Media & Telecommunications	**18%**	19%
Other (including Special Purpose Vehicles)	**12%**	9%
Total	**100%**	100%
Region		
Americas	**76%**	73%
Europe, Middle East and Africa	**20%**	24%
Asia	**4%**	3%
Total	**100%**	100%
Credit Quality (Credit Rating Equivalent)		
AAA	**1%**	2%
AA	**5%**	4%
A	**14%**	17%
BBB	**29%**	32%
BB or lower	**51%**	45%
Total	**100%**	100%

- **PWM, Residential Real Estate and Other Lending.** We extend PWM loans and lending commitments through our private bank that are secured by residential real estate, securities or other assets. The fair value of the collateral received against such loans and lending commitments generally exceeds their carrying value.

  We also have residential real estate and other lending exposures, which includes purchased residential real estate and unsecured consumer loans and commitments to purchase such loans (including distressed loans) and securities.

  The table below presents credit exposure from PWM, residential real estate and other lending, and the concentration by region.

$ in millions	PWM	Residential Real Estate and Other
As of December 2018		
Credit Exposure	**$26,152**	**$12,599**
Americas	**91%**	**73%**
Europe, Middle East and Africa	**7%**	**26%**
Asia	**2%**	**1%**
Total	**100%**	**100%**
As of December 2017		
Credit Exposure	$24,855	$10,242
Americas	90%	74%
Europe, Middle East and Africa	5%	26%
Asia	5%	–
Total	100%	100%

- **Consumer Lending.** We originate unsecured consumer loans.

  The table below presents credit exposure from originated unsecured consumer loans and the concentration for the five most concentrated U.S. states.

$ in millions	Consumer
As of December 2018	
Credit Exposure	**$4,536**
California	**12%**
Texas	**9%**
New York	**7%**
Florida	**7%**
Illinois	**4%**
Other	**61%**
Total	**100%**
As of December 2017	
Credit Exposure	$1,912
California	11%
Texas	10%
New York	7%
Florida	7%
Illinois	4%
Other	61%
Total	100%

See Note 9 to the consolidated financial statements for further information about the credit quality indicators of consumer loans.

Securities Financing Transactions. We enter into securities financing transactions in order to, among other things, facilitate client activities, invest excess cash, acquire securities to cover short positions and finance certain activities. We bear credit risk related to resale agreements and securities borrowed only to the extent that cash advanced or the value of securities pledged or delivered to the counterparty exceeds the value of the collateral received. We also have credit exposure on repurchase agreements and securities loaned to the extent that the value of securities pledged or delivered to the counterparty for these transactions exceeds the amount of cash or collateral received. Securities collateral obtained for securities financing transactions primarily includes U.S. and non-U.S. government and agency obligations.

The table below presents credit exposure from secured financing transactions and the concentration by industry, region and credit quality.

	As of December	
$ in millions	**2018**	2017
Secured Financing Transactions	**$20,979**	$29,071
Industry		
Financial Institutions	**31%**	29%
Funds	**33%**	28%
Municipalities & Nonprofit	**7%**	6%
Sovereign	**28%**	36%
Other (including Special Purpose Vehicles)	**1%**	1%
Total	**100%**	100%
Region		
Americas	**33%**	30%
Europe, Middle East and Africa	**41%**	46%
Asia	**26%**	24%
Total	**100%**	100%
Credit Quality (Credit Rating Equivalent)		
AAA	**11%**	12%
AA	**34%**	33%
A	**35%**	35%
BBB	**10%**	10%
BB or lower	**10%**	10%
Total	**100%**	100%

The table above reflects both netting agreements and collateral that management considers when determining credit risk.

Other Credit Exposures. We are exposed to credit risk from our receivables from brokers, dealers and clearing organizations and customers and counterparties. Receivables from brokers, dealers and clearing organizations primarily consist of initial margin placed with clearing organizations and receivables related to sales of securities which have traded, but not yet settled. These receivables generally have minimal credit risk due to the low probability of clearing organization default and the short-term nature of receivables related to securities settlements. Receivables from customers and counterparties generally consist of collateralized receivables related to customer securities transactions and generally have minimal credit risk due to both the value of the collateral received and the short-term nature of these receivables.

The table below presents other credit exposures and the concentration by industry, region and credit quality.

	As of December	
$ in millions	**2018**	2017
Other Credit Exposures	**$41,649**	$34,323
Industry		
Financial Institutions	**84%**	88%
Funds	**7%**	6%
Natural Resources & Utilities	**4%**	3%
Other (including Special Purpose Vehicles)	**5%**	3%
Total	**100%**	100%
Region		
Americas	**44%**	41%
Europe, Middle East and Africa	**46%**	49%
Asia	**10%**	10%
Total	**100%**	100%
Credit Quality (Credit Rating Equivalent)		
AAA	**3%**	3%
AA	**47%**	51%
A	**26%**	27%
BBB	**8%**	7%
BB or lower	**16%**	12%
Total	**100%**	100%

The table above reflects collateral that management considers when determining credit risk.

Selected Exposures

We have credit and market exposures, as described below, that have had heightened focus due to recent events and broad market concerns. Credit exposure represents the potential for loss due to the default or deterioration in credit quality of a counterparty or borrower. Market exposure represents the potential for loss in value of our long and short inventory due to changes in market prices.

The international sanctions on Russia have led to concerns about its economic stability. As of December 2018, our total credit exposure to Russia was $371 million, which was primarily with non-sovereign counterparties or borrowers, and was primarily related to loans and lending commitments. In addition, our total market exposure to Russia as of December 2018 was $502 million, reflecting equity exposure with non-sovereign issuers or underliers.

The potential restructuring of Lebanon's sovereign debt has led to concerns about its financial stability. As of December 2018, our credit exposure to Lebanon was $570 million, substantially all of which related to loans and lending commitments with non-sovereign borrowers. After taking into consideration the benefit of cash and Lebanese securities collateral held, our net credit exposure was not material. In addition, our total market exposure to Lebanon as of December 2018 was not material.

The debt crisis in Mozambique has resulted in credit rating downgrades and political instability in Ukraine has led to economic concerns. In addition, Venezuela has delayed payments on its sovereign debt and its political situation remains unclear. As of December 2018, our total credit and market exposure to each of Mozambique, Ukraine and Venezuela was not material.

We have a comprehensive framework to monitor, measure and assess our country exposures and to determine our risk appetite. We determine the country of risk by the location of the counterparty, issuer or underlier's assets, where they generate revenue, the country in which they are headquartered, the jurisdiction where a claim against them could be enforced, and/or the government whose policies affect their ability to repay their obligations. We monitor our credit exposure to a specific country both at the individual counterparty level, as well as at the aggregate country level.

We use regular stress tests, described above, to calculate the credit exposures, including potential concentrations that would result from applying shocks to counterparty credit ratings or credit risk factors. To supplement these regular stress tests, we also conduct tailored stress tests on an ad hoc basis in response to specific market events that we deem significant. These stress tests are designed to estimate the direct impact of the event on our credit and market exposures resulting from shocks to risk factors including, but not limited to, currency rates, interest rates, and equity prices. We also utilize these stress tests to estimate the indirect impact of certain hypothetical events on our country exposures, such as the impact of credit market deterioration on corporate borrowers and counterparties along with the shocks to the risk factors described above. The parameters of these shocks vary based on the scenario reflected in each stress test. We review estimated losses produced by the stress tests in order to understand their magnitude, highlight potential loss concentrations, and assess and mitigate our exposures where necessary.

See "Stress Tests" above, "Liquidity Risk Management — Stress Tests" and "Market Risk Management — Risk Measures — Stress Testing" for further information about stress tests.

Operational Risk Management

Overview

Operational risk is the risk of an adverse outcome resulting from inadequate or failed internal processes, people, systems or from external events. Our exposure to operational risk arises from routine processing errors, as well as extraordinary incidents, such as major systems failures or legal and regulatory matters.

Potential types of loss events related to internal and external operational risk include:

- Clients, products and business practices;
- Execution, delivery and process management;
- Business disruption and system failures;
- Employment practices and workplace safety;
- Damage to physical assets;
- Internal fraud; and
- External fraud.

We maintain a comprehensive control framework designed to provide a well-controlled environment to minimize operational risks. The Firmwide Conduct and Operational Risk Committee is globally responsible for the ongoing approval and monitoring of the frameworks, policies, parameters, limits and thresholds which govern our operational risks.

Operational Risk Management, which is independent of our revenue-producing units and reports to our chief risk officer, has primary responsibility for developing and implementing a formalized framework for assessing, monitoring and managing operational risk with the goal of maintaining our exposure to operational risk at levels that are within our risk appetite.

Operational Risk Management Process

Our process for managing operational risk includes:

- Collecting complete, accurate and timely information;
- Training, supervision and development of our people;
- Active participation of senior management in identifying and mitigating our key operational risks;
- Independent risk oversight and control functions that monitor operational risk, and implementation of policies and procedures, and controls designed to prevent the occurrence of operational risk events; and
- Proactive communication between our revenue-producing units and our independent risk oversight and control functions.

We combine top-down and bottom-up approaches to manage and measure operational risk. From a top-down perspective, our senior management assesses firmwide and business-level operational risk profiles. From a bottom-up perspective, our first and second lines of defense are responsible for risk identification and risk management on a day-to-day basis, including escalating operational risks to senior management.

Our operational risk management framework is in part designed to comply with the operational risk measurement rules under the Capital Framework and has evolved based on the changing needs of our businesses and regulatory guidance.

Our operational risk management framework consists of the following practices:

- Risk identification and assessment;
- Risk measurement; and
- Risk monitoring and reporting.

Risk Identification and Assessment

The core of our operational risk management framework is risk identification and assessment. We have a comprehensive data collection process, including firmwide policies and procedures, for operational risk events.

We have established policies that require all employees to report and escalate operational risk events. When operational risk events are identified, our policies require that the events be documented and analyzed to determine whether changes are required in our systems and/or processes to further mitigate the risk of future events.

We use operational risk management applications to capture and organize operational risk event data and key metrics. One of our key risk identification and assessment tools is an operational risk and control self-assessment process, which is performed by our managers. This process consists of the identification and rating of operational risks, on a forward-looking basis, and the related controls. The results from this process are analyzed to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk.

Risk Measurement

We measure our operational risk exposure using both statistical modeling and scenario analyses, which involve qualitative and quantitative assessments of internal and external operational risk event data and internal control factors for each of our businesses. Operational risk measurement also incorporates an assessment of business environment factors, including, but not limited to:

- Evaluations of the complexity of our business activities;
- The degree of automation in our processes;
- New activity information;
- The legal and regulatory environment; and
- Changes in the markets for our products and services, including the diversity and sophistication of our customers and counterparties.

The results from these scenario analyses are used to monitor changes in operational risk and to determine business lines that may have heightened exposure to operational risk. These analyses are used in the determination of the appropriate level of operational risk capital to hold.

Stress Tests

We perform stress tests on a regular basis as part of our routine risk management processes. We also perform stress tests that are designed to ensure a comprehensive analysis of our vulnerabilities and idiosyncratic risks combining financial and nonfinancial risks, including, but not limited to, credit, market, liquidity and funding, operational and compliance, strategic, systemic and emerging risks into a single combined scenario.

Risk Monitoring and Reporting

We evaluate changes in our operational risk profile and our businesses, including changes in business mix or jurisdictions in which we operate, by monitoring the factors noted above at a firmwide level. We have both preventive and detective internal controls, which are designed to reduce the frequency and severity of operational risk losses and the probability of operational risk events. We monitor the results of assessments and independent internal audits of these internal controls.

We have established limits and thresholds consistent with our risk appetite statement that are approved by the Risk Committee of the Board, as well as escalation protocols. Our operational risk limits and thresholds are monitored by Operational Risk Management. Operational Risk Management is responsible for identifying and escalating to senior management and/or the appropriate risk committee, on a timely basis, instances where limits and thresholds have been exceeded.

Model Review and Validation

The statistical models utilized by Operational Risk Management are independently reviewed, validated and approved by Model Risk Management. See "Model Risk Management" for further information.

Model Risk Management

Overview

Model risk is the potential for adverse consequences from decisions made based on model outputs that may be incorrect or used inappropriately. We rely on quantitative models across our business activities primarily to value certain financial assets and financial liabilities, to monitor and manage our risk, and to measure and monitor our regulatory capital.

Our model risk management framework is managed through a governance structure and risk management controls, which encompass standards designed to ensure we maintain a comprehensive model inventory, including risk assessment and classification, sound model development practices, independent review and model-specific usage controls. The Firmwide Model Risk Control Committee oversees our model risk management framework.

Model Risk Management, which is independent of our revenue-producing units, model developers, model owners and model users, and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing our model risk through firmwide oversight across our global businesses, and provides periodic updates to senior management, risk committees and the Risk Committee of the Board.

Model Review and Validation Process

Model Risk Management consists of quantitative professionals who perform an independent review, validation and approval of our models. This review includes an analysis of the model documentation, independent testing, an assessment of the appropriateness of the methodology used, and verification of compliance with model development and implementation standards. Model Risk Management reviews all existing models on an annual basis, and approves new models or significant changes to models prior to implementation.

The model validation process incorporates a review of models and trade and risk parameters across a broad range of scenarios (including extreme conditions) in order to critically evaluate and verify:

- The model's conceptual soundness, including the reasonableness of model assumptions, and suitability for intended use;
- The testing strategy utilized by the model developers to ensure that the models function as intended;
- The suitability of the calculation techniques incorporated in the model;
- The model's accuracy in reflecting the characteristics of the related product and its significant risks;
- The model's consistency with models for similar products; and
- The model's sensitivity to input parameters and assumptions.

See "Critical Accounting Policies — Fair Value — Review of Valuation Models," "Liquidity Risk Management," "Market Risk Management," "Credit Risk Management" and "Operational Risk Management" for further information about our use of models within these areas.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Quantitative and qualitative disclosures about market risk are set forth in "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management" in Part II, Item 7 of this Form 10-K.

Item 8. Financial Statements and Supplementary Data

Management's Report on Internal Control over Financial Reporting

Management of The Goldman Sachs Group, Inc., together with its consolidated subsidiaries (the firm), is responsible for establishing and maintaining adequate internal control over financial reporting. The firm's internal control over financial reporting is a process designed under the supervision of the firm's principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the firm's financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles.

As of December 31, 2018, management conducted an assessment of the firm's internal control over financial reporting based on the framework established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management has determined that the firm's internal control over financial reporting as of December 31, 2018 was effective.

Our internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of management and the directors of the firm; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the firm's assets that could have a material effect on our financial statements.

The firm's internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report appearing on page 103, which expresses an unqualified opinion on the effectiveness of the firm's internal control over financial reporting as of December 31, 2018.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and the Shareholders of The Goldman Sachs Group, Inc.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial condition of The Goldman Sachs Group, Inc. and its subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of earnings, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing on page 102. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PRICEWATERHOUSECOOPERS LLP

New York, New York
February 25, 2019

We have served as the Company's auditor since 1922.

Consolidated Statements of Earnings

in millions, except per share amounts	Year Ended December **2018**	2017	2016
Revenues			
Investment banking	**$ 7,862**	$ 7,371	$ 6,273
Investment management	**6,514**	5,803	5,407
Commissions and fees	**3,199**	3,051	3,208
Market making	**9,451**	7,660	9,933
Other principal transactions	**5,823**	5,913	3,382
Total non-interest revenues	**32,849**	29,798	28,203
Interest income	**19,679**	13,113	9,691
Interest expense	**15,912**	10,181	7,104
Net interest income	**3,767**	2,932	2,587
Total net revenues	**36,616**	32,730	30,790
Provision for credit losses	**674**	657	182
Operating expenses			
Compensation and benefits	**12,328**	11,653	11,448
Brokerage, clearing, exchange and distribution fees	**3,200**	2,876	2,823
Market development	**740**	588	457
Communications and technology	**1,023**	897	809
Depreciation and amortization	**1,328**	1,152	998
Occupancy	**809**	733	788
Professional fees	**1,214**	1,165	1,081
Other expenses	**2,819**	1,877	1,900
Total operating expenses	**23,461**	20,941	20,304
Pre-tax earnings	**12,481**	11,132	10,304
Provision for taxes	**2,022**	6,846	2,906
Net earnings	**10,459**	4,286	7,398
Preferred stock dividends	**599**	601	311
Net earnings applicable to common shareholders	**$ 9,860**	$ 3,685	$ 7,087
Earnings per common share			
Basic	**$ 25.53**	$ 9.12	$ 16.53
Diluted	**$ 25.27**	$ 9.01	$ 16.29
Average common shares			
Basic	**385.4**	401.6	427.4
Diluted	**390.2**	409.1	435.1

Consolidated Statements of Comprehensive Income

$ in millions	Year Ended December **2018**	2017	2016
Net earnings	**$10,459**	$ 4,286	$ 7,398
Other comprehensive income/(loss) adjustments, net of tax:			
Currency translation	**4**	22	(60)
Debt valuation adjustment	**2,553**	(807)	(544)
Pension and postretirement liabilities	**119**	130	(199)
Available-for-sale securities	**(103)**	(9)	–
Other comprehensive income/(loss)	**2,573**	(664)	(803)
Comprehensive income	**$13,032**	$ 3,622	$ 6,595

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Financial Condition

$ in millions	As of December **2018**	2017
Assets		
Cash and cash equivalents	**$130,547**	$110,051
Collateralized agreements:		
Securities purchased under agreements to resell (includes **$139,220** and $120,420 at fair value)	**139,258**	120,822
Securities borrowed (includes **$23,142** and $78,189 at fair value)	**135,285**	190,848
Receivables:		
Loans receivable	**80,590**	65,933
Customer and other receivables (includes **$3,189** and $3,526 at fair value)	**79,315**	84,788
Financial instruments owned (at fair value and includes **$55,081** and $50,335 pledged as collateral)	**336,161**	315,988
Other assets	**30,640**	28,346
Total assets	**$931,796**	$916,776
Liabilities and shareholders' equity		
Deposits (includes **$21,060** and $22,902 at fair value)	**$158,257**	$138,604
Collateralized financings:		
Securities sold under agreements to repurchase (at fair value)	**78,723**	84,718
Securities loaned (includes **$3,241** and $5,357 at fair value)	**11,808**	14,793
Other secured financings (includes **$20,904** and $24,345 at fair value)	**21,433**	24,788
Customer and other payables	**180,235**	178,169
Financial instruments sold, but not yet purchased (at fair value)	**108,897**	111,930
Unsecured short-term borrowings (includes **$16,963** and $16,904 at fair value)	**40,502**	46,922
Unsecured long-term borrowings (includes **$46,584** and $38,638 at fair value)	**224,149**	217,687
Other liabilities (includes **$132** and $268 at fair value)	**17,607**	16,922
Total liabilities	**841,611**	834,533
Commitments, contingencies and guarantees		
Shareholders' equity		
Preferred stock; aggregate liquidation preference of **$11,203** and $11,853	**11,203**	11,853
Common stock; **891,356,284** and 884,592,863 shares issued, and **367,741,973** and 374,808,805 shares outstanding	**9**	9
Share-based awards	**2,845**	2,777
Nonvoting common stock; no shares issued and outstanding	**–**	–
Additional paid-in capital	**54,005**	53,357
Retained earnings	**100,100**	91,519
Accumulated other comprehensive income/(loss)	**693**	(1,880)
Stock held in treasury, at cost; **523,614,313** and 509,784,060 shares	**(78,670)**	(75,392)
Total shareholders' equity	**90,185**	82,243
Total liabilities and shareholders' equity	**$931,796**	$916,776

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Shareholders' Equity

	Year Ended December		
$ in millions	**2018**	2017	2016
Preferred stock			
Beginning balance	**$ 11,853**	$ 11,203	$ 11,200
Issued	**–**	1,500	1,325
Redeemed	**(650)**	(850)	(1,322)
Ending balance	**11,203**	11,853	11,203
Common stock			
Beginning balance	**9**	9	9
Issued	**–**	–	–
Ending balance	**9**	9	9
Share-based awards			
Beginning balance, as previously reported	**2,777**	3,914	4,151
Cumulative effect of change in accounting principle for forfeiture of share-based awards	**–**	35	–
Beginning balance, adjusted	**2,777**	3,949	4,151
Issuance and amortization of share-based awards	**1,355**	1,810	2,143
Delivery of common stock underlying share-based awards	**(1,175)**	(2,704)	(2,068)
Forfeiture of share-based awards	**(80)**	(89)	(102)
Exercise of share-based awards	**(32)**	(189)	(210)
Ending balance	**2,845**	2,777	3,914
Additional paid-in capital			
Beginning balance	**53,357**	52,638	51,340
Delivery of common stock underlying share-based awards	**1,751**	2,934	2,282
Cancellation of share-based awards in satisfaction of withholding tax requirements	**(1,118)**	(2,220)	(1,121)
Preferred stock issuance costs, net of reversals upon redemption	**15**	8	(10)
Excess net tax benefit related to share-based awards	**–**	–	147
Cash settlement of share-based awards	**–**	(3)	–
Ending balance	**54,005**	53,357	52,638
Retained earnings			
Beginning balance, as previously reported	**91,519**	89,039	83,386
Cumulative effect of change in accounting principle for:			
Revenue recognition from contracts with clients, net of tax	**(53)**	–	–
Forfeiture of share-based awards, net of tax	**–**	(24)	–
Debt valuation adjustment, net of tax	**–**	–	(305)
Beginning balance, adjusted	**91,466**	89,015	83,081
Net earnings	**10,459**	4,286	7,398
Dividends and dividend equivalents declared on common stock and share-based awards	**(1,226)**	(1,181)	(1,129)
Dividends declared on preferred stock	**(584)**	(587)	(577)
Preferred stock redemption discount/(premium)	**(15)**	(14)	266
Ending balance	**100,100**	91,519	89,039
Accumulated other comprehensive income/(loss)			
Beginning balance, as previously reported	**(1,880)**	(1,216)	(718)
Cumulative effect of change in accounting principle for debt valuation adjustment, net of tax	**–**	–	305
Beginning balance, adjusted	**(1,880)**	(1,216)	(413)
Other comprehensive income/(loss)	**2,573**	(664)	(803)
Ending balance	**693**	(1,880)	(1,216)
Stock held in treasury, at cost			
Beginning balance	**(75,392)**	(68,694)	(62,640)
Repurchased	**(3,294)**	(6,721)	(6,069)
Reissued	**21**	34	22
Other	**(5)**	(11)	(7)
Ending balance	**(78,670)**	(75,392)	(68,694)
Total shareholders' equity	**$ 90,185**	$ 82,243	$ 86,893

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows

$ in millions	Year Ended December 2018	2017	2016
Cash flows from operating activities			
Net earnings	**$ 10,459**	$ 4,286	$ 7,398
Adjustments to reconcile net earnings to net cash provided by/(used for) operating activities:			
Depreciation and amortization	**1,328**	1,152	998
Deferred income taxes	**(2,645)**	5,458	551
Share-based compensation	**1,831**	1,769	2,111
Loss/(gain) related to extinguishment of unsecured borrowings	**(160)**	(114)	3
Provision for credit losses	**674**	657	182
Changes in operating assets and liabilities:			
Customer and other receivables and payables, net	**7,186**	(30,136)	(14,723)
Collateralized transactions (excluding other secured financings), net	**28,147**	10,025	78
Financial instruments owned (excluding available-for-sale securities)	**(23,381)**	(11,843)	13,662
Financial instruments sold, but not yet purchased	**(3,670)**	(5,296)	1,960
Other, net	**652**	5,815	(5,726)
Net cash provided by/(used for) operating activities	**20,421**	(18,227)	6,494
Cash flows from investing activities			
Purchase of property, leasehold improvements and equipment	**(7,982)**	(3,184)	(2,865)
Proceeds from sales of property, leasehold improvements and equipment	**3,711**	574	381
Net cash acquired in/(used for) business acquisitions	**(162)**	(2,383)	14,922
Purchase of investments	**(3,790)**	(9,853)	–
Proceeds from sales and paydowns of investments	**411**	2,900	1,517
Loans receivable, net	**(14,865)**	(16,693)	(4,280)
Net cash provided by/(used for) investing activities	**(22,677)**	(28,639)	9,675
Cash flows from financing activities			
Unsecured short-term borrowings, net	**2,337**	(501)	(1,506)
Other secured financings (short-term), net	**586**	(405)	(808)
Proceeds from issuance of other secured financings (long-term)	**4,996**	7,401	4,186
Repayment of other secured financings (long-term), including the current portion	**(9,482)**	(4,726)	(7,375)
Purchase of APEX, senior guaranteed securities and trust preferred securities	**(35)**	(237)	(1,171)
Proceeds from issuance of unsecured long-term borrowings	**45,927**	58,347	50,763
Repayment of unsecured long-term borrowings, including the current portion	**(37,243)**	(30,748)	(36,556)
Derivative contracts with a financing element, net	**2,294**	1,684	2,115
Deposits, net	**20,206**	14,506	10,058
Preferred stock redemption	**(650)**	(850)	–
Common stock repurchased	**(3,294)**	(6,772)	(6,078)
Settlement of share-based awards in satisfaction of withholding tax requirements	**(1,118)**	(2,223)	(1,128)
Dividends and dividend equivalents paid on common stock, preferred stock and share-based awards	**(1,810)**	(1,769)	(1,706)
Proceeds from issuance of preferred stock, net of issuance costs	**–**	1,495	1,303
Proceeds from issuance of common stock, including exercise of share-based awards	**38**	7	6
Cash settlement of share-based awards	**–**	(3)	–
Net cash provided by financing activities	**22,752**	35,206	12,103
Net increase/(decrease) in cash and cash equivalents	**20,496**	(11,660)	28,272
Cash and cash equivalents, beginning balance	**110,051**	121,711	93,439
Cash and cash equivalents, ending balance	**$130,547**	$110,051	$121,711

SUPPLEMENTAL DISCLOSURES:

Cash payments for interest, net of capitalized interest, were $16.72 billion for 2018, $11.17 billion for 2017 and $7.14 billion for 2016, and cash payments for income taxes, net of refunds, were $1.27 billion for 2018, $1.42 billion for 2017 and $1.06 billion for 2016. Cash flows related to common stock repurchased includes common stock repurchased in the prior period for which settlement occurred during the current period and excludes common stock repurchased during the current period for which settlement occurred in the following period.

Non-cash activities during 2018:

- The firm received $773 million of loans receivable and $109 million of held-to-maturity securities in connection with the securitization of financial instruments owned and held for sale loans included in customer and other receivables.
- The firm exchanged $35 million of Trust Preferred Securities and common beneficial interests for $35 million of certain of the firm's junior subordinated debt.

Non-cash activities during 2017:

- The firm received $465 million of loans receivable and $107 million of held-to-maturity securities in connection with the securitization of financial instruments owned and held for sale loans included in customer and other receivables.
- The firm exchanged $237 million of Trust Preferred Securities and common beneficial interests for $248 million of the firm's junior subordinated debt.

Non-cash activities during 2016:

- The firm received $389 million of loans receivable and $112 million of held-to-maturity securities in connection with the securitization of financial instruments owned.
- The impact of adoption of ASU No. 2015-02 was a net reduction to both total assets and total liabilities of approximately $200 million. See Note 3 for further information.
- The firm sold assets of $1.81 billion and liabilities of $697 million, that were previously classified as held for sale, in exchange for $1.11 billion of financial instruments.
- The firm exchanged $1.04 billion of APEX for $1.31 billion of Series E and Series F Preferred Stock. See Note 19 for further information.
- The firm exchanged $127 million of senior guaranteed trust securities for $124 million of the firm's junior subordinated debt.

The accompanying notes are an integral part of these consolidated financial statements.

Note 1.

Description of Business

The Goldman Sachs Group, Inc. (Group Inc. or parent company), a Delaware corporation, together with its consolidated subsidiaries (collectively, the firm), is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals. Founded in 1869, the firm is headquartered in New York and maintains offices in all major financial centers around the world.

The firm reports its activities in the following four business segments:

Investment Banking

The firm provides a broad range of investment banking services to a diverse group of corporations, financial institutions, investment funds and governments. Services include strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs and risk management, and debt and equity underwriting of public offerings and private placements, including local and cross-border transactions and acquisition financing, as well as derivative transactions directly related to these activities.

Institutional Client Services

The firm facilitates client transactions and makes markets in fixed income, equity, currency and commodity products, primarily with institutional clients such as corporations, financial institutions, investment funds and governments. The firm also makes markets in and clears client transactions on major stock, options and futures exchanges worldwide and provides financing, securities lending and other prime brokerage services to institutional clients.

Investing & Lending

The firm invests in and originates loans to provide financing to clients. These investments and loans are typically longer-term in nature. The firm makes investments, some of which are consolidated, including through its Merchant Banking business and its Special Situations Group, in debt securities and loans, public and private equity securities, infrastructure and real estate entities. Some of these investments are made indirectly through funds that the firm manages. The firm also makes unsecured loans through its digital platform, *Marcus: by Goldman Sachs* and secured loans through its digital platform, *Goldman Sachs Private Bank Select*.

Investment Management

The firm provides investment management services and offers investment products (primarily through separately managed accounts and commingled vehicles, such as mutual funds and private investment funds) across all major asset classes to a diverse set of institutional and individual clients. The firm also offers wealth advisory services provided by the firm's subsidiary, The Ayco Company, L.P., including portfolio management and financial planning and counseling, and brokerage and other transaction services to high-net-worth individuals and families.

Note 2.

Basis of Presentation

These consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and include the accounts of Group Inc. and all other entities in which the firm has a controlling financial interest. Intercompany transactions and balances have been eliminated.

All references to 2018, 2017 and 2016 refer to the firm's years ended, or the dates, as the context requires, December 31, 2018, December 31, 2017 and December 31, 2016, respectively. Any reference to a future year refers to a year ending on December 31 of that year. Certain reclassifications have been made to previously reported amounts to conform to the current presentation.

Note 3.

Significant Accounting Policies

The firm's significant accounting policies include when and how to measure the fair value of assets and liabilities, accounting for goodwill and identifiable intangible assets, and when to consolidate an entity. See Notes 5 through 8 for policies on fair value measurements, Note 13 for policies on goodwill and identifiable intangible assets, and below and Note 12 for policies on consolidation accounting. All other significant accounting policies are either described below or included in the following footnotes:

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased	Note 4
Fair Value Measurements	Note 5
Cash Instruments	Note 6
Derivatives and Hedging Activities	Note 7
Fair Value Option	Note 8
Loans Receivable	Note 9
Collateralized Agreements and Financings	Note 10
Securitization Activities	Note 11
Variable Interest Entities	Note 12
Other Assets	Note 13
Deposits	Note 14
Short-Term Borrowings	Note 15
Long-Term Borrowings	Note 16
Other Liabilities	Note 17
Commitments, Contingencies and Guarantees	Note 18
Shareholders' Equity	Note 19
Regulation and Capital Adequacy	Note 20
Earnings Per Common Share	Note 21
Transactions with Affiliated Funds	Note 22
Interest Income and Interest Expense	Note 23
Income Taxes	Note 24
Business Segments	Note 25
Credit Concentrations	Note 26
Legal Proceedings	Note 27
Employee Benefit Plans	Note 28
Employee Incentive Plans	Note 29
Parent Company	Note 30

Consolidation

The firm consolidates entities in which the firm has a controlling financial interest. The firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity (VIE).

Voting Interest Entities. Voting interest entities are entities in which (i) the total equity investment at risk is sufficient to enable the entity to finance its activities independently and (ii) the equity holders have the power to direct the activities of the entity that most significantly impact its economic performance, the obligation to absorb the losses of the entity and the right to receive the residual returns of the entity. The usual condition for a controlling financial interest in a voting interest entity is ownership of a majority voting interest. If the firm has a controlling majority voting interest in a voting interest entity, the entity is consolidated.

Variable Interest Entities. A VIE is an entity that lacks one or more of the characteristics of a voting interest entity. The firm has a controlling financial interest in a VIE when the firm has a variable interest or interests that provide it with (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE. See Note 12 for further information about VIEs.

Equity-Method Investments. When the firm does not have a controlling financial interest in an entity but can exert significant influence over the entity's operating and financial policies, the investment is accounted for either (i) under the equity method of accounting or (ii) at fair value by electing the fair value option available under U.S. GAAP. Significant influence generally exists when the firm owns 20% to 50% of the entity's common stock or in-substance common stock.

In general, the firm accounts for investments acquired after the fair value option became available, at fair value. In certain cases, the firm applies the equity method of accounting to new investments that are strategic in nature or closely related to the firm's principal business activities, when the firm has a significant degree of involvement in the cash flows or operations of the investee or when cost-benefit considerations are less significant. See Note 13 for further information about equity-method investments.

Investment Funds. The firm has formed numerous investment funds with third-party investors. These funds are typically organized as limited partnerships or limited liability companies for which the firm acts as general partner or manager. Generally, the firm does not hold a majority of the economic interests in these funds. These funds are usually voting interest entities and generally are not consolidated because third-party investors typically have rights to terminate the funds or to remove the firm as general partner or manager. Investments in these funds are generally measured at net asset value (NAV) and are included in financial instruments owned. See Notes 6, 18 and 22 for further information about investments in funds.

Use of Estimates

Preparation of these consolidated financial statements requires management to make certain estimates and assumptions, the most important of which relate to fair value measurements, accounting for goodwill and identifiable intangible assets, the allowance for credit losses on loans receivable and lending commitments held for investment, provisions for losses that may arise from litigation and regulatory proceedings (including governmental investigations), and provisions for losses that may arise from tax audits. These estimates and assumptions are based on the best available information but actual results could be materially different.

Revenue Recognition

Financial Assets and Financial Liabilities at Fair Value. Financial instruments owned and financial instruments sold, but not yet purchased are recorded at fair value either under the fair value option or in accordance with other U.S. GAAP. In addition, the firm has elected to account for certain of its other financial assets and financial liabilities at fair value by electing the fair value option. The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. Fair value gains or losses are generally included in market making for positions in Institutional Client Services and other principal transactions for positions in Investing & Lending. See Notes 5 through 8 for further information about fair value measurements.

Revenue from Contracts with Clients. Beginning in January 2018, the firm accounts for revenue earned from contracts with clients for services such as investment banking, investment management, and execution and clearing (contracts with clients) under ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." As such, revenues for these services are recognized when the performance obligations related to the underlying transaction are completed. See "Recent Accounting Developments — Revenue from Contracts with Customers (ASC 606)" for further information.

The firm's net revenues from contracts with clients subject to this ASU represent approximately 50% of the firm's total net revenues for 2018. This includes approximately 80% of the firm's investment banking revenues, substantially all of the investment management revenues, and commissions and fees for 2018. See Note 25 for information about the firm's net revenues by business segment.

Investment Banking

Advisory. Fees from financial advisory assignments are recognized in revenues when the services related to the underlying transaction are completed under the terms of the assignment. Beginning in January 2018, non-refundable deposits and milestone payments in connection with financial advisory assignments are recognized in revenues upon completion of the underlying transaction or when the assignment is otherwise concluded. Prior to January 2018, non-refundable deposits and milestone payments were recognized in revenues in accordance with the terms of the contract.

Beginning in January 2018, certain expenses associated with financial advisory assignments are recognized when incurred. Client reimbursements for such expenses are included in financial advisory revenues. Prior to January 2018, such expenses were deferred until the related revenue was recognized or the assignment was otherwise concluded and were presented net of client reimbursements.

Underwriting. Fees from underwriting assignments are recognized in revenues upon completion of the underlying transaction based on the terms of the assignment.

Certain expenses associated with underwriting assignments are deferred until the related revenue is recognized or the assignment is otherwise concluded. Beginning in January 2018, such expenses are presented as operating expenses. Prior to January 2018, such expenses were presented net within underwriting revenues.

Investment Management

The firm earns management fees and incentive fees for investment management services, which are included in investment management revenues. The firm makes payments to brokers and advisors related to the placement of the firm's investment funds (distribution fees), which are included in brokerage, clearing, exchange and distribution fees.

Management Fees. Management fees for mutual funds are calculated as a percentage of daily net asset value and are received monthly. Management fees for hedge funds and separately managed accounts are calculated as a percentage of month-end net asset value and are generally received quarterly. Management fees for private equity funds are calculated as a percentage of monthly invested capital or committed capital and are received quarterly, semi-annually or annually, depending on the fund. Management fees are recognized over time in the period the investment management services are provided.

Distribution fees paid by the firm are calculated based on either a percentage of the management fee, the investment fund's net asset value or the committed capital. Beginning in January 2018, the firm presents such fees in brokerage, clearing, exchange and distribution fees. Prior to January 2018, where the firm was considered an agent to the arrangement, such fees were presented on a net basis in investment management revenues.

Incentive Fees. Incentive fees are calculated as a percentage of a fund's or separately managed account's return, or excess return above a specified benchmark or other performance target. Incentive fees are generally based on investment performance over a twelve-month period or over the life of a fund. Fees that are based on performance over a twelve-month period are subject to adjustment prior to the end of the measurement period. For fees that are based on investment performance over the life of the fund, future investment underperformance may require fees previously distributed to the firm to be returned to the fund.

Beginning in January 2018, incentive fees earned from a fund or separately managed account are recognized when it is probable that a significant reversal of such fees will not occur, which is generally when such fees are no longer subject to fluctuations in the market value of investments held by the fund or separately managed account. Therefore, incentive fees recognized during the period may relate to performance obligations satisfied in previous periods. Prior to January 2018, incentive fees were recognized only when all material contingencies were resolved.

Commissions and Fees

The firm earns commissions and fees from executing and clearing client transactions on stock, options and futures markets, as well as over-the-counter (OTC) transactions. Commissions and fees are recognized on the day the trade is executed. The firm also provides third-party research services to clients in connection with certain soft-dollar arrangements.

Beginning in January 2018, third-party research costs incurred by the firm in connection with soft-dollar arrangements are presented net within commissions and fees. Prior to January 2018, such costs were presented in brokerage, clearing, exchange and distribution fees.

Remaining Performance Obligations

Remaining performance obligations are services that the firm has committed to perform in the future in connection with its contracts with clients. The firm's remaining performance obligations are generally related to its financial advisory assignments and certain investment management activities. Revenues associated with remaining performance obligations relating to financial advisory assignments cannot be determined until the outcome of the transaction. For the firm's investment management activities, where fees are calculated based on the net asset value of the fund or separately managed account, future revenues associated with remaining performance obligations cannot be determined as such fees are subject to fluctuations in the market value of investments held by the fund or separately managed account.

The firm is able to determine the future revenues associated with management fees calculated based on committed capital. As of December 2018, substantially all of the firm's future net revenues associated with remaining performance obligations will be recognized through 2024. Annual revenues associated with such performance obligations average less than $250 million through 2024.

Transfers of Financial Assets

Transfers of financial assets are accounted for as sales when the firm has relinquished control over the assets transferred. For transfers of financial assets accounted for as sales, any gains or losses are recognized in net revenues. Assets or liabilities that arise from the firm's continuing involvement with transferred financial assets are initially recognized at fair value. For transfers of financial assets that are not accounted for as sales, the assets are generally included in financial instruments owned and the transfer is accounted for as a collateralized financing, with the related interest expense recognized over the life of the transaction. See Note 10 for further information about transfers of financial assets accounted for as collateralized financings and Note 11 for further information about transfers of financial assets accounted for as sales.

Cash and Cash Equivalents

The firm defines cash equivalents as highly liquid overnight deposits held in the ordinary course of business. Cash and cash equivalents included cash and due from banks of $10.66 billion as of December 2018 and $10.79 billion as of December 2017. Cash and cash equivalents also included interest-bearing deposits with banks of $119.89 billion as of December 2018 and $99.26 billion as of December 2017.

The firm segregates cash for regulatory and other purposes related to client activity. Cash and cash equivalents segregated for regulatory and other purposes were $23.14 billion as of December 2018 and $18.44 billion as of December 2017. In addition, the firm segregates securities for regulatory and other purposes related to client activity. See Note 10 for further information about segregated securities.

Customer and Other Receivables

Customer and other receivables included receivables from customers and counterparties of $53.81 billion as of December 2018 and $60.11 billion as of December 2017, and receivables from brokers, dealers and clearing organizations of $25.50 billion as of December 2018 and $24.68 billion as of December 2017. Such receivables primarily consist of customer margin loans, receivables resulting from unsettled transactions, collateral posted in connection with certain derivative transactions and certain transfers of assets accounted for as secured loans rather than purchases at fair value.

Substantially all of these receivables are accounted for at amortized cost net of estimated uncollectible amounts. Certain of the firm's customer and other receivables are accounted for at fair value under the fair value option, with changes in fair value generally included in market making revenues. See Note 8 for further information about customer and other receivables accounted for at fair value under the fair value option. In addition, the firm's customer and other receivables included $3.83 billion as of December 2018 and $4.63 billion as of December 2017 of loans held for sale accounted for at the lower of cost or fair value. See Note 5 for an overview of the firm's fair value measurement policies. As of both December 2018 and December 2017, the carrying value of receivables not accounted for at fair value generally approximated fair value. As these receivables are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these receivables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of both December 2018 and December 2017. Interest on customer and other receivables is recognized over the life of the transaction and included in interest income.

Customer and other receivables includes receivables from contracts with clients and, beginning in January 2018, also includes contract assets. Contract assets represent the firm's right to receive consideration for services provided in connection with its contracts with clients for which collection is conditional and not merely subject to the passage of time. As of December 2018, the firm's receivables from contracts with clients were $1.94 billion and contract assets were not material.

Customer and Other Payables

Customer and other payables included payables to customers and counterparties of $173.99 billion as of December 2018 and $171.50 billion as of December 2017, and payables to brokers, dealers and clearing organizations of $6.24 billion as of December 2018 and $6.67 billion as of December 2017. Such payables primarily consist of customer credit balances related to the firm's prime brokerage activities. Customer and other payables are accounted for at cost plus accrued interest, which generally approximates fair value. As these payables are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these payables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of both December 2018 and December 2017. Interest on customer and other payables is recognized over the life of the transaction and included in interest expense.

Offsetting Assets and Liabilities

To reduce credit exposures on derivatives and securities financing transactions, the firm may enter into master netting agreements or similar arrangements (collectively, netting agreements) with counterparties that permit it to offset receivables and payables with such counterparties. A netting agreement is a contract with a counterparty that permits net settlement of multiple transactions with that counterparty, including upon the exercise of termination rights by a non-defaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated. In addition, the firm receives and posts cash and securities collateral with respect to its derivatives and securities financing transactions, subject to the terms of the related credit support agreements or similar arrangements (collectively, credit support agreements). An enforceable credit support agreement grants the non-defaulting party exercising termination rights the right to liquidate the collateral and apply the proceeds to any amounts owed. In order to assess enforceability of the firm's right of setoff under netting and credit support agreements, the firm evaluates various factors, including applicable bankruptcy laws, local statutes and regulatory provisions in the jurisdiction of the parties to the agreement.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) in the consolidated statements of financial condition when a legal right of setoff exists under an enforceable netting agreement. Securities purchased under agreements to resell (resale agreements) and securities sold under agreements to repurchase (repurchase agreements) and securities borrowed and loaned transactions with the same term and currency are presented on a net-by-counterparty basis in the consolidated statements of financial condition when such transactions meet certain settlement criteria and are subject to netting agreements.

In the consolidated statements of financial condition, derivatives are reported net of cash collateral received and posted under enforceable credit support agreements, when transacted under an enforceable netting agreement. In the consolidated statements of financial condition, resale and repurchase agreements, and securities borrowed and loaned, are not reported net of the related cash and securities received or posted as collateral. See Note 10 for further information about collateral received and pledged, including rights to deliver or repledge collateral. See Notes 7 and 10 for further information about offsetting.

Foreign Currency Translation

Assets and liabilities denominated in non-U.S. currencies are translated at rates of exchange prevailing on the date of the consolidated statements of financial condition and revenues and expenses are translated at average rates of exchange for the period. Foreign currency remeasurement gains or losses on transactions in nonfunctional currencies are recognized in earnings. Gains or losses on translation of the financial statements of a non-U.S. operation, when the functional currency is other than the U.S. dollar, are included, net of hedges and taxes, in the consolidated statements of comprehensive income.

Recent Accounting Developments

Revenue from Contracts with Customers (ASC 606). In May 2014, the FASB issued ASU No. 2014-09. This ASU, as amended, provides comprehensive guidance on the recognition of revenue earned from contracts with customers arising from the transfer of goods and services, guidance on accounting for certain contract costs and new disclosures.

The firm adopted this ASU in January 2018 under a modified retrospective approach. As a result of adopting this ASU, the firm, among other things, delays recognition of non-refundable and milestone payments on financial advisory assignments until the assignments are completed, and recognizes certain investment management fees earlier than under the firm's previous revenue recognition policies.

The firm also prospectively changed the presentation of certain costs from a net presentation within revenues to a gross basis, and vice versa. Beginning in 2018, certain underwriting expenses, which were netted against investment banking revenues, and certain distribution fees, which were netted against investment management revenues, are presented gross as operating expenses. Costs incurred in connection with certain soft-dollar arrangements, which were presented gross as operating expenses, are presented net within commissions and fees.

The cumulative effect of adopting this ASU as of January 1, 2018 was a decrease to retained earnings of $53 million (net of tax). In addition, net revenues and operating expenses were both higher by approximately $300 million for 2018, due to the changes in the presentation of certain costs from a net presentation within revenues to a gross basis.

Recognition and Measurement of Financial Assets and Financial Liabilities (ASC 825). In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments (Topic 825) — Recognition and Measurement of Financial Assets and Financial Liabilities." This ASU amends certain aspects of recognition, measurement, presentation and disclosure of financial instruments. It includes a requirement to present separately in other comprehensive income changes in fair value attributable to a firm's own credit spreads (debt valuation adjustment or DVA), net of tax, on financial liabilities for which the fair value option was elected.

In January 2016, the firm early adopted this ASU for the requirements related to DVA and reclassified the cumulative DVA, a gain of $305 million (net of tax), from retained earnings to accumulated other comprehensive loss. The adoption of the remaining provisions of the ASU in January 2018 did not have a material impact on the firm's financial condition, results of operations or cash flows.

Leases (ASC 842). In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)." This ASU requires that, for leases longer than one year, a lessee recognize in the statements of financial condition a right-of-use asset, representing the right to use the underlying asset for the lease term, and a lease liability, representing the liability to make lease payments. It also requires that for finance leases, a lessee recognize interest expense on the lease liability, separately from the amortization of the right-of-use asset in the statements of earnings, while for operating leases, such amounts should be recognized as a combined expense. It also requires that for qualifying sale-leaseback transactions the seller recognize any gain or loss (based on the estimated fair value of the asset at the time of sale) when control of the asset is transferred instead of amortizing it over the lease period. In addition, this ASU requires expanded disclosures about the nature and terms of lease agreements.

The firm adopted this ASU in January 2019 under a modified retrospective approach. The impact of adopting this ASU was a gross up of $1.77 billion on the firm's consolidated statements of financial condition and an increase to retained earnings of $12 million (net of tax) as of January 1, 2019.

Improvements to Employee Share-Based Payment Accounting (ASC 718). In March 2016, the FASB issued ASU No. 2016-09, "Compensation — Stock Compensation (Topic 718) — Improvements to Employee Share-Based Payment Accounting." This ASU includes a requirement that the tax effect related to the settlement of share-based awards be recorded in income tax benefit or expense in the statements of earnings rather than directly to additional paid-in capital. This change has no impact on total shareholders' equity and is required to be adopted prospectively. The ASU also allows for forfeitures to be recorded when they occur rather than estimated over the vesting period. This change is required to be applied on a modified retrospective basis.

The firm adopted the ASU in January 2017 and subsequent to the adoption, the tax effect related to the settlement of share-based awards is recognized in the statements of earnings rather than directly to additional paid-in capital. The firm also elected to account for forfeitures as they occur, rather than to estimate forfeitures over the vesting period, and the cumulative effect of this election upon adoption was an increase of $35 million to share-based awards and a decrease of $24 million (net of tax of $11 million) to retained earnings.

In addition, the ASU modifies the classification of certain share-based payment activities within the statements of cash flows. Upon adoption, the firm reclassified amounts related to such activities within the consolidated statements of cash flows, on a retrospective basis.

Measurement of Credit Losses on Financial Instruments (ASC 326). In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments — Credit Losses (Topic 326) — Measurement of Credit Losses on Financial Instruments." This ASU amends several aspects of the measurement of credit losses on financial instruments, including replacing the existing incurred credit loss model and other models with the Current Expected Credit Losses (CECL) model and amending certain aspects of accounting for purchased financial assets with deterioration in credit quality since origination.

Under CECL, the allowance for losses for financial assets that are measured at amortized cost reflects management's estimate of credit losses over the remaining expected life of the financial assets. Expected credit losses for newly recognized financial assets, as well as changes to expected credit losses during the period, would be recognized in earnings. For certain purchased financial assets with deterioration in credit quality since origination, an initial allowance would be recorded for expected credit losses and recognized as an increase to the purchase price rather than as an expense. The ASU eliminates the existing accounting guidance for Purchased Credit Impaired (PCI) loans. The ASU is effective for the firm in January 2020 under a modified retrospective approach with early adoption permitted beginning in January 2019. The firm plans to adopt this ASU on January 1, 2020.

Expected credit losses, including losses on off-balance-sheet exposures such as lending commitments, will be measured based on historical experience, current conditions and forecasts that affect the collectability of the reported amount.

The firm has substantially completed development of credit loss models for its significant loan portfolios and is in the process of validating data inputs to these models, while continuing to develop the policies, systems and controls that will be required to implement CECL. The firm currently expects to begin testing of these models in the first half of 2019. The firm currently expects that its allowance for credit losses will likely increase when CECL is adopted as the allowance will cover expected credit losses over the full expected life of the loan portfolios and will also take into account expected changes in future economic conditions. In addition, an allowance will be recorded for certain purchased loans with deterioration in credit quality since origination with a corresponding increase to their gross carrying value. The extent of the impact of adoption of this ASU on the firm's financial condition, results of operations and cash flows will depend on, among other things, the economic environment, and the size and type of loan portfolios held by the firm on the date of adoption.

Classification of Certain Cash Receipts and Cash Payments (ASC 230). In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows (Topic 230) — Classification of Certain Cash Receipts and Cash Payments." This ASU provides guidance on the disclosure and classification of certain items within the statements of cash flows.

The firm adopted this ASU in January 2018 under a retrospective approach. The impact for 2017 was an increase of $485 million to net cash used for operating activities, a decrease of $477 million to net cash used for investing activities and an increase of $8 million to net cash provided by financing activities. The impact for 2016 was a decrease of $406 million to net cash provided by operating activities, an increase of $405 million to net cash provided by investing activities and an increase of $1 million to net cash provided by financing activities.

Clarifying the Definition of a Business (ASC 805). In January 2017, the FASB issued ASU No. 2017-01, "Business Combinations (Topic 805) — Clarifying the Definition of a Business." The ASU amends the definition of a business and provides a threshold which must be considered to determine whether a transaction is an acquisition (or disposal) of an asset or a business.

The firm adopted this ASU in January 2018 under a prospective approach. Adoption of the ASU did not have a material impact on the firm's financial condition, results of operations or cash flows. The firm expects that fewer transactions will be treated as acquisitions (or disposals) of businesses as a result of adopting this ASU.

Simplifying the Test for Goodwill Impairment (ASC 350). In January 2017, the FASB issued ASU No. 2017-04, "Intangibles — Goodwill and Other (Topic 350) — Simplifying the Test for Goodwill Impairment." The ASU simplifies the quantitative goodwill impairment test by eliminating the second step of the test. Under this ASU, impairment will be measured by comparing the estimated fair value of the reporting unit with its carrying value.

The firm early adopted this ASU in the fourth quarter of 2017. Adoption of the ASU did not have a material impact on the results of the firm's goodwill impairment test.

Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets (ASC 610-20). In February 2017, the FASB issued ASU No. 2017-05, "Other Income — Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20) — Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets." The ASU clarifies the scope of guidance applicable to sales of nonfinancial assets and also provides guidance on accounting for partial sales of such assets.

The firm adopted this ASU in January 2018 under a modified retrospective approach. Adoption of the ASU did not have an impact on the firm's financial condition, results of operations or cash flows.

Targeted Improvements to Accounting for Hedging Activities (ASC 815). In August 2017, the FASB issued ASU No. 2017-12, "Derivatives and Hedging (Topic 815) — Targeted Improvements to Accounting for Hedging Activities." The ASU amends certain rules for hedging relationships, expands the types of strategies that are eligible for hedge accounting treatment to more closely align the results of hedge accounting with risk management activities and amends disclosure requirements related to fair value and net investment hedges.

The firm early adopted this ASU in January 2018 under a modified retrospective approach for hedge accounting treatment, and under a prospective approach for the amended disclosure requirements. Adoption of this ASU did not have a material impact on the firm's financial condition, results of operations or cash flows. See Note 7 for further information.

Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (ASC 220). In February 2018, the FASB issued ASU No. 2018-02, "Income Statement — Reporting Comprehensive Income (Topic 220) — Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This ASU permits a reporting entity to reclassify the income tax effects of the Tax Cuts and Jobs Act (Tax Legislation) on items within accumulated other comprehensive income to retained earnings.

The firm adopted this ASU in January 2019 and did not elect to reclassify the income tax effects of Tax Legislation from accumulated other comprehensive income to retained earnings. Therefore, the adoption of the ASU did not have an impact on the firm's financial condition, results of operations or cash flows.

Changes to the Disclosure Requirements for Fair Value Measurement (ASC 820). In August 2018, the FASB issued ASU No. 2018-13, "Fair Value Measurement (Topic 820) — Changes to the Disclosure Requirements for Fair Value Measurement." This ASU, among other amendments, eliminates the requirement to disclose the amounts and reasons for transfers between level 1 and level 2 of the fair value hierarchy and modifies the disclosure requirement relating to investments in funds at NAV. The firm early adopted this ASU in the third quarter of 2018 and disclosures were modified in accordance with the ASU. See Notes 5 through 8 for further information.

Note 4.

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased

Financial instruments owned and financial instruments sold, but not yet purchased are accounted for at fair value either under the fair value option or in accordance with other U.S. GAAP. See Note 8 for information about other financial assets and financial liabilities at fair value.

The table below presents financial instruments owned and financial instruments sold, but not yet purchased.

$ in millions	Financial Instruments Owned	Financial Instruments Sold, But Not Yet Purchased
As of December 2018		
Money market instruments	**$ 2,635**	**$ –**
Government and agency obligations:		
U.S.	**110,616**	**5,080**
Non-U.S.	**43,607**	**25,347**
Loans and securities backed by:		
Commercial real estate	**3,369**	**–**
Residential real estate	**12,949**	**1**
Corporate debt instruments	**31,207**	**10,411**
State and municipal obligations	**1,233**	**–**
Other debt obligations	**1,864**	**1**
Equity securities	**76,170**	**25,463**
Commodities	**3,729**	**–**
Investments in funds at NAV	**3,936**	**–**
Subtotal	**291,315**	**66,303**
Derivatives	**44,846**	**42,594**
Total	**$336,161**	**$108,897**
As of December 2017		
Money market instruments	$ 1,608	$ –
Government and agency obligations:		
U.S.	76,418	17,911
Non-U.S.	33,956	23,311
Loans and securities backed by:		
Commercial real estate	3,436	1
Residential real estate	11,993	–
Corporate debt instruments	33,683	7,153
State and municipal obligations	1,471	–
Other debt obligations	2,164	1
Equity securities	96,132	23,882
Commodities	3,194	40
Investments in funds at NAV	4,596	–
Subtotal	268,651	72,299
Derivatives	47,337	39,631
Total	$315,988	$111,930

In the table above:

- Money market instruments includes commercial paper, certificates of deposit and time deposits, substantially all of which have a maturity of less than one year.
- Corporate debt instruments includes corporate loans and debt securities.
- Equity securities includes public and private equities, exchange-traded funds and convertible debentures. Such amounts include investments accounted for at fair value under the fair value option where the firm would otherwise apply the equity method of accounting of $7.91 billion as of December 2018 and $8.49 billion as of December 2017.

Gains and Losses from Market Making and Other Principal Transactions

The table below presents market making revenues by major product type and other principal transactions revenues.

	Year Ended December		
$ in millions	**2018**	2017	2016
Interest rates	**$ (2,056)**	$ 6,406	$ (1,979)
Credit	**1,276**	701	1,854
Currencies	**4,582**	(3,249)	6,158
Equities	**5,186**	3,162	2,873
Commodities	**463**	640	1,027
Market making	**9,451**	7,660	9,933
Other principal transactions	**5,823**	5,913	3,382
Total	**$15,274**	$13,573	$13,315

In the table above:

- Gains/(losses) include both realized and unrealized gains and losses, and are primarily related to the firm's financial instruments owned and financial instruments sold, but not yet purchased, including both derivative and non-derivative financial instruments.
- Gains/(losses) exclude related interest income and interest expense. See Note 23 for further information about interest income and interest expense.
- Gains/(losses) on other principal transactions are included in the firm's Investing & Lending segment. See Note 25 for net revenues, including net interest income, by product type for Investing & Lending, as well as the amount of net interest income included in Investing & Lending.
- Gains/(losses) are not representative of the manner in which the firm manages its business activities because many of the firm's market-making and client facilitation strategies utilize financial instruments across various product types. Accordingly, gains or losses in one product type frequently offset gains or losses in other product types. For example, most of the firm's longer-term derivatives across product types are sensitive to changes in interest rates and may be economically hedged with interest rate swaps. Similarly, a significant portion of the firm's cash instruments and derivatives across product types has exposure to foreign currencies and may be economically hedged with foreign currency contracts.

Note 5.

Fair Value Measurements

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The firm measures certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks).

The best evidence of fair value is a quoted price in an active market. If quoted prices in active markets are not available, fair value is determined by reference to prices for similar instruments, quoted prices or recent transactions in less active markets, or internally developed models that primarily use market-based or independently sourced inputs, including, but not limited to, interest rates, volatilities, equity or debt prices, foreign exchange rates, commodity prices, credit spreads and funding spreads (i.e., the spread or difference between the interest rate at which a borrower could finance a given financial instrument relative to a benchmark interest rate).

U.S. GAAP has a three-level hierarchy for disclosure of fair value measurements. This hierarchy prioritizes inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial instrument's level in this hierarchy is based on the lowest level of input that is significant to its fair value measurement. In evaluating the significance of a valuation input, the firm considers, among other factors, a portfolio's net risk exposure to that input. The fair value hierarchy is as follows:

Level 1. Inputs are unadjusted quoted prices in active markets to which the firm had access at the measurement date for identical, unrestricted assets or liabilities.

Level 2. Inputs to valuation techniques are observable, either directly or indirectly.

Level 3. One or more inputs to valuation techniques are significant and unobservable.

The fair values for substantially all of the firm's financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and the firm's credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads. Valuation adjustments are generally based on market evidence.

See Notes 6 through 8 for further information about fair value measurements of cash instruments, derivatives and other financial assets and financial liabilities at fair value.

The table below presents financial assets and financial liabilities accounted for at fair value under the fair value option or in accordance with other U.S. GAAP.

	As of December	
$ in millions	**2018**	2017
Total level 1 financial assets	**$170,463**	$155,086
Total level 2 financial assets	**354,515**	395,606
Total level 3 financial assets	**22,181**	19,201
Investments in funds at NAV	**3,936**	4,596
Counterparty and cash collateral netting	**(49,383)**	(56,366)
Total financial assets at fair value	**$501,712**	$518,123
Total assets	**$931,796**	$916,776
Total level 3 financial assets divided by:		
Total assets	**2.4%**	2.1%
Total financial assets at fair value	**4.4%**	3.7%
Total level 1 financial liabilities	**$ 54,151**	$ 63,589
Total level 2 financial liabilities	**258,335**	261,719
Total level 3 financial liabilities	**23,804**	19,620
Counterparty and cash collateral netting	**(39,786)**	(39,866)
Total financial liabilities at fair value	**$296,504**	$305,062
Total level 3 financial liabilities divided by total financial liabilities at fair value	**8.0%**	6.4%

In the table above:

- Counterparty netting among positions classified in the same level is included in that level.
- Counterparty and cash collateral netting represents the impact on derivatives of netting across levels of the fair value hierarchy.

The table below presents a summary of level 3 financial assets.

	As of December	
$ in millions	**2018**	2017
Cash instruments	**$17,227**	$15,395
Derivatives	**4,948**	3,802
Other financial assets	**6**	4
Total	**$22,181**	$19,201

Level 3 financial assets as of December 2018 increased compared with December 2017, primarily reflecting an increase in level 3 cash instruments. See Notes 6 through 8 for further information about level 3 financial assets (including information about unrealized gains and losses related to level 3 financial assets and financial liabilities, and transfers in and out of level 3).

Note 6.

Cash Instruments

Cash instruments include U.S. government and agency obligations, non-U.S. government and agency obligations, mortgage-backed loans and securities, corporate debt instruments, equity securities, investments in funds at NAV, and other non-derivative financial instruments owned and financial instruments sold, but not yet purchased. See below for the types of cash instruments included in each level of the fair value hierarchy and the valuation techniques and significant inputs used to determine their fair values. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Cash Instruments

Level 1 cash instruments include certain money market instruments, U.S. government obligations, most non-U.S. government obligations, certain government agency obligations, certain corporate debt instruments and actively traded listed equities. These instruments are valued using quoted prices for identical unrestricted instruments in active markets.

The firm defines active markets for equity instruments based on the average daily trading volume both in absolute terms and relative to the market capitalization for the instrument. The firm defines active markets for debt instruments based on both the average daily trading volume and the number of days with trading activity.

Level 2 Cash Instruments

Level 2 cash instruments include most money market instruments, most government agency obligations, certain non-U.S. government obligations, most mortgage-backed loans and securities, most corporate debt instruments, most state and municipal obligations, most other debt obligations, restricted or less liquid listed equities, commodities and certain lending commitments.

Valuations of level 2 cash instruments can be verified to quoted prices, recent trading activity for identical or similar instruments, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Valuation adjustments are typically made to level 2 cash instruments (i) if the cash instrument is subject to transfer restrictions and/or (ii) for other premiums and liquidity discounts that a market participant would require to arrive at fair value. Valuation adjustments are generally based on market evidence.

Level 3 Cash Instruments

Level 3 cash instruments have one or more significant valuation inputs that are not observable. Absent evidence to the contrary, level 3 cash instruments are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequently, the firm uses other methodologies to determine fair value, which vary based on the type of instrument. Valuation inputs and assumptions are changed when corroborated by substantive observable evidence, including values realized on sales.

Valuation Techniques and Significant Inputs of Level 3 Cash Instruments

Valuation techniques of level 3 cash instruments vary by instrument, but are generally based on discounted cash flow techniques. The valuation techniques and the nature of significant inputs used to determine the fair values of each type of level 3 cash instrument are described below:

Loans and Securities Backed by Commercial Real Estate. Loans and securities backed by commercial real estate are directly or indirectly collateralized by a single commercial real estate property or a portfolio of properties, and may include tranches of varying levels of subordination. Significant inputs are generally determined based on relative value analyses and include:

- Market yields implied by transactions of similar or related assets and/or current levels and changes in market indices such as the CMBX (an index that tracks the performance of commercial mortgage bonds);

- Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral;
- A measure of expected future cash flows in a default scenario (recovery rates) implied by the value of the underlying collateral, which is mainly driven by current performance of the underlying collateral, capitalization rates and multiples. Recovery rates are expressed as a percentage of notional or face value of the instrument and reflect the benefit of credit enhancements on certain instruments; and
- Timing of expected future cash flows (duration) which, in certain cases, may incorporate the impact of other unobservable inputs (e.g., prepayment speeds).

Loans and Securities Backed by Residential Real Estate. Loans and securities backed by residential real estate are directly or indirectly collateralized by portfolios of residential real estate and may include tranches of varying levels of subordination. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons to instruments with similar collateral and risk profiles. Significant inputs include:

- Market yields implied by transactions of similar or related assets;
- Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral;
- Cumulative loss expectations, driven by default rates, home price projections, residential property liquidation timelines, related costs and subsequent recoveries; and
- Duration, driven by underlying loan prepayment speeds and residential property liquidation timelines.

Corporate Debt Instruments. Corporate debt instruments includes corporate loans and debt securities. Significant inputs for corporate debt instruments are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include:

- Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices, such as the CDX (an index that tracks the performance of corporate credit);
- Current performance and recovery assumptions and, where the firm uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation; and
- Duration.

Equity Securities. Equity securities includes private equity securities and convertible debentures. Recent third-party completed or pending transactions (e.g., merger proposals, tender offers, debt restructurings) are considered to be the best evidence for any change in fair value. When these are not available, the following valuation methodologies are used, as appropriate:

- Industry multiples (primarily EBITDA multiples) and public comparables;
- Transactions in similar instruments;
- Discounted cash flow techniques; and
- Third-party appraisals.

The firm also considers changes in the outlook for the relevant industry and financial performance of the issuer as compared to projected performance. Significant inputs include:

- Market and transaction multiples;
- Discount rates and capitalization rates; and
- For equity securities with debt-like features, market yields implied by transactions of similar or related assets, current performance and recovery assumptions, and duration.

Other Cash Instruments. Other cash instruments includes U.S. government and agency obligations, non-U.S. government and agency obligations, state and municipal obligations, and other debt obligations. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include:

- Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices;
- Current performance and recovery assumptions and, where the firm uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation; and
- Duration.

Fair Value of Cash Instruments by Level

The table below presents cash instrument assets and liabilities at fair value by level within the fair value hierarchy.

$ in millions	Level 1	Level 2	Level 3	Total
As of December 2018				
Assets				
Money market instruments	**$ 1,489**	**$ 1,146**	**$ –**	**$ 2,635**
Government and agency obligations:				
U.S.	**82,264**	**28,327**	**25**	**110,616**
Non-U.S.	**33,231**	**10,366**	**10**	**43,607**
Loans and securities backed by:				
Commercial real estate	**–**	**2,350**	**1,019**	**3,369**
Residential real estate	**–**	**12,286**	**663**	**12,949**
Corporate debt instruments	**468**	**26,515**	**4,224**	**31,207**
State and municipal obligations	**–**	**1,210**	**23**	**1,233**
Other debt obligations	**–**	**1,326**	**538**	**1,864**
Equity securities	**52,989**	**12,456**	**10,725**	**76,170**
Commodities	**–**	**3,729**	**–**	**3,729**
Subtotal	**$170,441**	**$ 99,711**	**$17,227**	**$287,379**
Investments in funds at NAV				**3,936**
Total cash instrument assets				**$291,315**
Liabilities				
Government and agency obligations:				
U.S.	**$ (5,067)**	**$ (13)**	**$ –**	**$ (5,080)**
Non-U.S.	**(23,872)**	**(1,475)**	**–**	**(25,347)**
Loans and securities backed by residential real estate	**–**	**(1)**	**–**	**(1)**
Corporate debt instruments	**(4)**	**(10,376)**	**(31)**	**(10,411)**
Other debt obligations	**–**	**(1)**	**–**	**(1)**
Equity securities	**(25,147)**	**(298)**	**(18)**	**(25,463)**
Total cash instrument liabilities	**$ (54,090)**	**$(12,164)**	**$ (49)**	**$ (66,303)**
As of December 2017				
Assets				
Money market instruments	$ 398	$ 1,209	$ 1	$ 1,608
Government and agency obligations:				
U.S.	50,796	25,622	–	76,418
Non-U.S.	27,070	6,882	4	33,956
Loans and securities backed by:				
Commercial real estate	–	2,310	1,126	3,436
Residential real estate	–	11,325	668	11,993
Corporate debt instruments	752	29,661	3,270	33,683
State and municipal obligations	–	1,401	70	1,471
Other debt obligations	–	1,812	352	2,164
Equity securities	76,044	10,184	9,904	96,132
Commodities	–	3,194	–	3,194
Subtotal	$155,060	$ 93,600	$15,395	$264,055
Investments in funds at NAV				4,596
Total cash instrument assets				$268,651
Liabilities				
Government and agency obligations:				
U.S.	$ (17,845)	$ (66)	$ –	$ (17,911)
Non-U.S.	(21,820)	(1,491)	–	(23,311)
Loans and securities backed by commercial real estate	–	(1)	–	(1)
Corporate debt instruments	(2)	(7,099)	(52)	(7,153)
Other debt obligations	–	(1)	–	(1)
Equity securities	(23,866)	–	(16)	(23,882)
Commodities	–	(40)	–	(40)
Total cash instrument liabilities	$ (63,533)	$ (8,698)	$ (68)	$ (72,299)

In the table above:

- Cash instrument assets are included in financial instruments owned and cash instrument liabilities are included in financial instruments sold, but not yet purchased.
- Cash instrument assets are shown as positive amounts and cash instrument liabilities are shown as negative amounts.
- Money market instruments includes commercial paper, certificates of deposit and time deposits, substantially all of which have a maturity of less than one year.
- Corporate debt instruments includes corporate loans and debt securities.
- Equity securities includes public and private equities, exchange-traded funds and convertible debentures.
- As of both December 2018 and December 2017, substantially all level 3 equity securities consisted of private equity securities.

Significant Unobservable Inputs

The table below presents the amount of level 3 assets, and ranges and weighted averages of significant unobservable inputs used to value level 3 cash instruments.

	Level 3 Assets and Range of Significant Unobservable Inputs (Weighted Average) as of December	
$ in millions	**2018**	2017
Loans and securities backed by commercial real estate		
Level 3 assets	**$1,019**	$1,126
Yield	**6.9% to 22.5% (12.4%)**	4.6% to 22.0% (13.4%)
Recovery rate	**9.7% to 78.4% (42.9%)**	14.3% to 89.0% (43.8%)
Duration (years)	**0.4 to 7.1 (3.7)**	0.8 to 6.4 (2.1)
Loans and securities backed by residential real estate		
Level 3 assets	**$663**	$668
Yield	**2.6% to 19.3% (9.2%)**	2.3% to 15.0% (8.3%)
Cumulative loss rate	**8.3% to 37.7% (19.2%)**	12.5% to 43.0% (21.8%)
Duration (years)	**1.4 to 14.0 (6.7)**	0.7 to 14.0 (6.9)
Corporate debt instruments		
Level 3 assets	**$4,224**	$3,270
Yield	**0.7% to 32.3% (11.9%)**	3.6% to 24.5% (12.3%)
Recovery rate	**0.0% to 78.0% (57.8%)**	0.0% to 85.3% (62.8%)
Duration (years)	**0.4 to 13.5 (3.4)**	0.5 to 7.6 (3.2)
Equity securities		
Level 3 assets	**$10,725**	$9,904
Multiples	**1.0x to 23.6x (8.1x)**	1.1x to 30.5x (8.9x)
Discount rate/yield	**6.5% to 22.1% (14.3%)**	3.0% to 20.3% (14.0%)
Capitalization rate	**3.5% to 12.3% (6.1%)**	4.3% to 12.0% (6.1%)
Other cash instruments		
Level 3 assets	**$596**	$427
Yield	**4.1% to 11.5% (9.2%)**	4.0% to 11.7% (8.4%)
Duration (years)	**2.2 to 4.8 (2.8)**	3.5 to 11.4 (5.1)

In the table above:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of cash instrument.
- Weighted averages are calculated by weighting each input by the relative fair value of the cash instruments.
- The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one cash instrument. For example, the highest multiple for private equity securities is appropriate for valuing a specific private equity security but may not be appropriate for valuing any other private equity security. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of level 3 cash instruments.
- Increases in yield, discount rate, capitalization rate, duration or cumulative loss rate used in the valuation of level 3 cash instruments would have resulted in a lower fair value measurement, while increases in recovery rate or multiples would have resulted in a higher fair value measurement as of both December 2018 and December 2017. Due to the distinctive nature of each level 3 cash instrument, the interrelationship of inputs is not necessarily uniform within each product type.
- Loans and securities backed by commercial and residential real estate, corporate debt instruments and other cash instruments are valued using discounted cash flows, and equity securities are valued using market comparables and discounted cash flows.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, market comparables and discounted cash flows may be used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for level 3 cash instrument assets and liabilities.

	Year Ended December	
$ in millions	**2018**	2017
Total cash instrument assets		
Beginning balance	**$15,395**	$18,035
Net realized gains/(losses)	**501**	419
Net unrealized gains/(losses)	**816**	1,144
Purchases	**2,286**	1,635
Sales	**(2,184)**	(3,315)
Settlements	**(2,595)**	(2,265)
Transfers into level 3	**5,149**	2,405
Transfers out of level 3	**(2,141)**	(2,663)
Ending balance	**$17,227**	$15,395
Total cash instrument liabilities		
Beginning balance	**$ (68)**	$ (62)
Net realized gains/(losses)	**6**	(8)
Net unrealized gains/(losses)	**(7)**	(28)
Purchases	**41**	97
Sales	**(26)**	(20)
Settlements	**8**	(32)
Transfers into level 3	**(7)**	(18)
Transfers out of level 3	**4**	3
Ending balance	**$ (49)**	$ (68)

In the table above:

- Changes in fair value are presented for all cash instrument assets and liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relates to instruments that were still held at period-end.
- Purchases includes originations and secondary purchases.
- Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. If a cash instrument asset or liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is classified in level 3.
- For level 3 cash instrument assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 cash instrument liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Level 3 cash instruments are frequently economically hedged with level 1 and level 2 cash instruments and/or level 1, level 2 or level 3 derivatives. Accordingly, gains or losses that are classified in level 3 can be partially offset by gains or losses attributable to level 1 or level 2 cash instruments and/or level 1, level 2 or level 3 derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.

The table below disaggregates, by product type, the information for cash instrument assets included in the summary table above.

	Year Ended December	
$ in millions	**2018**	2017
Loans and securities backed by commercial real estate		
Beginning balance	**$ 1,126**	$ 1,645
Net realized gains/(losses)	**67**	35
Net unrealized gains/(losses)	**6**	71
Purchases	**133**	176
Sales	**(126)**	(319)
Settlements	**(411)**	(392)
Transfers into level 3	**538**	141
Transfers out of level 3	**(314)**	(231)
Ending balance	**$ 1,019**	$ 1,126
Loans and securities backed by residential real estate		
Beginning balance	**$ 668**	$ 845
Net realized gains/(losses)	**53**	37
Net unrealized gains/(losses)	**16**	96
Purchases	**119**	98
Sales	**(209)**	(246)
Settlements	**(163)**	(104)
Transfers into level 3	**242**	21
Transfers out of level 3	**(63)**	(79)
Ending balance	**$ 663**	$ 668
Corporate debt instruments		
Beginning balance	**$ 3,270**	$ 4,640
Net realized gains/(losses)	**214**	145
Net unrealized gains/(losses)	**(50)**	(13)
Purchases	**941**	666
Sales	**(480)**	(1,003)
Settlements	**(850)**	(1,062)
Transfers into level 3	**1,754**	1,130
Transfers out of level 3	**(575)**	(1,233)
Ending balance	**$ 4,224**	$ 3,270
Equity securities		
Beginning balance	**$ 9,904**	$10,263
Net realized gains/(losses)	**157**	185
Net unrealized gains/(losses)	**776**	982
Purchases	**990**	624
Sales	**(1,319)**	(1,702)
Settlements	**(1,013)**	(559)
Transfers into level 3	**2,413**	1,113
Transfers out of level 3	**(1,183)**	(1,002)
Ending balance	**$10,725**	$ 9,904
Other cash instruments		
Beginning balance	**$ 427**	$ 642
Net realized gains/(losses)	**10**	17
Net unrealized gains/(losses)	**68**	8
Purchases	**103**	71
Sales	**(50)**	(45)
Settlements	**(158)**	(148)
Transfers into level 3	**202**	–
Transfers out of level 3	**(6)**	(118)
Ending balance	**$ 596**	$ 427

Level 3 Rollforward Commentary

Year Ended December 2018. The net realized and unrealized gains on level 3 cash instrument assets of $1.32 billion (reflecting $501 million of net realized gains and $816 million of net unrealized gains) for 2018 included gains/(losses) of $(96) million reported in market making, $908 million reported in other principal transactions and $505 million reported in interest income.

The net unrealized gains on level 3 cash instrument assets for 2018 primarily reflected gains on private equity securities, principally driven by strong corporate performance and company-specific events.

Transfers into level 3 during 2018 primarily reflected transfers of certain private equity securities and corporate debt instruments from level 2, principally due to reduced price transparency as a result of a lack of market evidence, including fewer market transactions in these instruments.

Transfers out of level 3 during 2018 primarily reflected transfers of certain private equity securities and corporate debt instruments to level 2, principally due to increased price transparency as a result of market evidence, including market transactions in these instruments, and transfers of certain other corporate debt instruments to level 2, principally due to certain unobservable yield and duration inputs no longer being significant to the valuation of these instruments.

Year Ended December 2017. The net realized and unrealized gains on level 3 cash instrument assets of $1.56 billion (reflecting $419 million of net realized gains and $1.14 billion of net unrealized gains) for 2017 included gains/(losses) of $(99) million reported in market making, $1.13 billion reported in other principal transactions and $532 million reported in interest income.

The net unrealized gains on level 3 cash instrument assets for 2017 primarily reflected gains on private equity securities, principally driven by strong corporate performance and company-specific events.

Transfers into level 3 during 2017 primarily reflected transfers of certain corporate debt instruments and private equity securities from level 2, principally due to reduced price transparency as a result of a lack of market evidence, including fewer market transactions in these instruments.

Transfers out of level 3 during 2017 primarily reflected transfers of certain corporate debt instruments and private equity securities to level 2, principally due to increased price transparency as a result of market evidence, including market transactions in these instruments, and transfers of certain corporate debt instruments to level 2, principally due to certain unobservable yield and duration inputs no longer being significant to the valuation of these instruments.

Available-for-Sale Securities

The table below presents information about cash instruments that are accounted for as available-for-sale.

$ in millions	Amortized Cost	Fair Value	Weighted Average Yield
As of December 2018			
Less than 5 years	**$ 5,954**	**$ 5,879**	**2.10%**
Greater than 5 years	**6,231**	**6,153**	**2.44%**
Total U.S. government obligations	**12,185**	**12,032**	**2.28%**
Total available-for-sale securities	**$12,185**	**$12,032**	**2.28%**
As of December 2017			
Less than 5 years	$ 3,834	$ 3,800	1.95%
Greater than 5 years	5,207	5,222	2.41%
Total U.S. government obligations	9,041	9,022	2.22%
Less than 5 years	19	19	0.43%
Greater than 5 years	233	235	4.62%
Total other available-for-sale securities	252	254	4.30%
Total available-for-sale securities	$ 9,293	$ 9,276	2.27%

In the table above:

- U.S. government obligations were classified in level 1 of the fair value hierarchy as of both December 2018 and December 2017.
- Other available-for-sale securities included corporate debt securities, other debt obligations, securities backed by commercial real estate and money market instruments, substantially all of which were classified in level 2 of the fair value hierarchy as of December 2017.
- The gross unrealized losses included in accumulated other comprehensive loss were $153 million as of December 2018 and were related to U.S. government obligations in a continuous unrealized loss position for greater than a year. Such losses were not material as of December 2017.
- Available-for-sale securities in an unrealized loss position are periodically reviewed for other-than-temporary impairment. The firm considers various factors, including market conditions, changes in issuer credit ratings, severity and duration of the unrealized losses, and the intent and ability to hold the security until recovery to determine if the securities are other-than-temporarily impaired. There were no such impairments during either 2018 or 2017.

Investments in Funds at Net Asset Value Per Share

Cash instruments at fair value include investments in funds that are measured at NAV of the investment fund. The firm uses NAV to measure the fair value of its fund investments when (i) the fund investment does not have a readily determinable fair value and (ii) the NAV of the investment fund is calculated in a manner consistent with the measurement principles of investment company accounting, including measurement of the investments at fair value.

Substantially all of the firm's investments in funds at NAV consist of investments in firm-sponsored private equity, credit, real estate and hedge funds where the firm co-invests with third-party investors.

Private equity funds primarily invest in a broad range of industries worldwide, including leveraged buyouts, recapitalizations, growth investments and distressed investments. Credit funds generally invest in loans and other fixed income instruments and are focused on providing private high-yield capital for leveraged and management buyout transactions, recapitalizations, financings, refinancings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers. Real estate funds invest globally, primarily in real estate companies, loan portfolios, debt recapitalizations and property. Private equity, credit and real estate funds are closed-end funds in which the firm's investments are generally not eligible for redemption. Distributions will be received from these funds as the underlying assets are liquidated or distributed, the timing of which is uncertain.

The firm also invests in hedge funds, primarily multi-disciplinary hedge funds that employ a fundamental bottom-up investment approach across various asset classes and strategies. The firm's investments in hedge funds primarily include interests where the underlying assets are illiquid in nature, and proceeds from redemptions will not be received until the underlying assets are liquidated or distributed, the timing of which is uncertain.

Many of the funds described above are "covered funds" as defined in the Volcker Rule of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act). The Board of Governors of the Federal Reserve System (FRB) extended the conformance period to July 2022 for the firm's investments in, and relationships with, certain legacy "illiquid funds" (as defined in the Volcker Rule) that were in place prior to December 2013. This extension is applicable to substantially all of the firm's remaining investments in, and relationships with, such covered funds.

The table below presents the fair value of investments in funds at NAV and the related unfunded commitments.

$ in millions	Fair Value of Investments	Unfunded Commitments
As of December 2018		
Private equity funds	**$2,683**	**$ 809**
Credit funds	**548**	**1,099**
Hedge funds	**161**	**–**
Real estate funds	**544**	**203**
Total	**$3,936**	**$2,111**
As of December 2017		
Private equity funds	$3,478	$ 614
Credit funds	266	985
Hedge funds	223	–
Real estate funds	629	201
Total	$4,596	$1,800

Note 7.

Derivatives and Hedging Activities

Derivative Activities

Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivatives may be traded on an exchange (exchange-traded) or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain of the firm's OTC derivatives are cleared and settled through central clearing counterparties (OTC-cleared), while others are bilateral contracts between two counterparties (bilateral OTC).

Market Making. As a market maker, the firm enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this role, the firm typically acts as principal and is required to commit capital to provide execution, and maintains inventory in response to, or in anticipation of, client demand.

Risk Management. The firm also enters into derivatives to actively manage risk exposures that arise from its market-making and investing and lending activities in derivative and cash instruments. The firm's holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis. The offsetting impact of this economic hedging is reflected in the same business segment as the related revenues. In addition, the firm may enter into derivatives designated as hedges under U.S. GAAP. These derivatives are used to manage interest rate exposure in certain fixed-rate unsecured long-term and short-term borrowings, and deposits, and to manage foreign currency exposure on the net investment in certain non-U.S. operations.

The firm enters into various types of derivatives, including:

- **Futures and Forwards.** Contracts that commit counterparties to purchase or sell financial instruments, commodities or currencies in the future.
- **Swaps.** Contracts that require counterparties to exchange cash flows such as currency or interest payment streams. The amounts exchanged are based on the specific terms of the contract with reference to specified rates, financial instruments, commodities, currencies or indices.
- **Options.** Contracts in which the option purchaser has the right, but not the obligation, to purchase from or sell to the option writer financial instruments, commodities or currencies within a defined time period for a specified price.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement (counterparty netting). Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements (cash collateral netting). Derivative assets are included in financial instruments owned and derivative liabilities are included in financial instruments sold, but not yet purchased. Realized and unrealized gains and losses on derivatives not designated as hedges are included in market making and other principal transactions in Note 4.

The tables below present the gross fair value and the notional amounts of derivative contracts by major product type, the amounts of counterparty and cash collateral netting in the consolidated statements of financial condition, as well as cash and securities collateral posted and received under enforceable credit support agreements that do not meet the criteria for netting under U.S. GAAP.

	As of December 2018		As of December 2017	
$ in millions	**Derivative Assets**	**Derivative Liabilities**	Derivative Assets	Derivative Liabilities
Not accounted for as hedges				
Exchange-traded	**$ 760**	**$ 1,553**	$ 554	$ 644
OTC-cleared	**5,040**	**3,552**	5,392	2,773
Bilateral OTC	**227,274**	**211,091**	274,986	249,750
Total interest rates	**233,074**	**216,196**	280,932	253,167
OTC-cleared	**4,778**	**4,517**	5,727	5,670
Bilateral OTC	**14,658**	**13,784**	16,966	15,600
Total credit	**19,436**	**18,301**	22,693	21,270
Exchange-traded	**11**	**16**	23	363
OTC-cleared	**656**	**800**	988	847
Bilateral OTC	**85,772**	**87,953**	94,481	95,127
Total currencies	**86,439**	**88,769**	95,492	96,337
Exchange-traded	**4,445**	**4,093**	4,135	3,854
OTC-cleared	**433**	**439**	197	197
Bilateral OTC	**12,746**	**15,595**	9,748	12,097
Total commodities	**17,624**	**20,127**	14,080	16,148
Exchange-traded	**13,431**	**11,765**	10,552	10,335
Bilateral OTC	**34,687**	**40,668**	40,735	45,253
Total equities	**48,118**	**52,433**	51,287	55,588
Subtotal	**404,691**	**395,826**	464,484	442,510
Accounted for as hedges				
OTC-cleared	**2**	**–**	21	–
Bilateral OTC	**3,024**	**7**	2,309	3
Total interest rates	**3,026**	**7**	2,330	3
OTC-cleared	**25**	**53**	15	30
Bilateral OTC	**54**	**61**	34	114
Total currencies	**79**	**114**	49	144
Subtotal	**3,105**	**121**	2,379	147
Total gross fair value	**$ 407,796**	**$ 395,947**	$ 466,863	$ 442,657
Offset in consolidated statements of financial condition				
Exchange-traded	**$ (14,377)**	**$ (14,377)**	$ (12,963)	$ (12,963)
OTC-cleared	**(8,888)**	**(8,888)**	(9,267)	(9,267)
Bilateral OTC	**(290,961)**	**(290,961)**	(341,824)	(341,824)
Counterparty netting	**(314,226)**	**(314,226)**	(364,054)	(364,054)
OTC-cleared	**(1,389)**	**(164)**	(2,423)	(180)
Bilateral OTC	**(47,335)**	**(38,963)**	(53,049)	(38,792)
Cash collateral netting	**(48,724)**	**(39,127)**	(55,472)	(38,972)
Total amounts offset	**$(362,950)**	**$(353,353)**	$(419,526)	$(403,026)
Included in consolidated statements of financial condition				
Exchange-traded	**$ 4,270**	**$ 3,050**	$ 2,301	$ 2,233
OTC-cleared	**657**	**309**	650	70
Bilateral OTC	**39,919**	**39,235**	44,386	37,328
Total	**$ 44,846**	**$ 42,594**	$ 47,337	$ 39,631
Not offset in consolidated statements of financial condition				
Cash collateral	**$ (614)**	**$ (1,328)**	$ (602)	$ (2,375)
Securities collateral	**(12,740)**	**(8,414)**	(13,947)	(8,722)
Total	**$ 31,492**	**$ 32,852**	$ 32,788	$ 28,534

	Notional Amounts as of December	
$ in millions	**2018**	2017
Not accounted for as hedges		
Exchange-traded	**$ 5,139,159**	$10,212,510
OTC-cleared	**14,290,327**	14,739,556
Bilateral OTC	**12,858,248**	12,862,328
Total interest rates	**32,287,734**	37,814,394
OTC-cleared	**394,494**	386,163
Bilateral OTC	**762,653**	868,226
Total credit	**1,157,147**	1,254,389
Exchange-traded	**5,599**	10,450
OTC-cleared	**113,360**	98,549
Bilateral OTC	**6,596,741**	7,331,516
Total currencies	**6,715,700**	7,440,515
Exchange-traded	**259,287**	239,749
OTC-cleared	**1,516**	3,925
Bilateral OTC	**244,958**	250,547
Total commodities	**505,761**	494,221
Exchange-traded	**635,988**	655,485
Bilateral OTC	**1,070,211**	1,127,812
Total equities	**1,706,199**	1,783,297
Subtotal	**42,372,541**	48,786,816
Accounted for as hedges		
OTC-cleared	**85,681**	52,785
Bilateral OTC	**12,022**	15,188
Total interest rates	**97,703**	67,973
OTC-cleared	**2,911**	2,210
Bilateral OTC	**8,089**	8,347
Total currencies	**11,000**	10,557
Subtotal	**108,703**	78,530
Total notional amounts	**$42,481,244**	$48,865,346

In the tables above:

- Gross fair values exclude the effects of both counterparty netting and collateral, and therefore are not representative of the firm's exposure.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Notional amounts, which represent the sum of gross long and short derivative contracts, provide an indication of the volume of the firm's derivative activity and do not represent anticipated losses.
- Total gross fair value of derivatives included derivative assets of $10.68 billion as of December 2018 and $11.24 billion as of December 2017, and derivative liabilities of $11.95 billion as of December 2018 and $13.00 billion as of December 2017, which are not subject to an enforceable netting agreement or are subject to a netting agreement that the firm has not yet determined to be enforceable.
- During the second quarter of 2018, consistent with the rules of a clearing organization, the firm elected to consider its transactions with that clearing organization as settled each day. As of December 2017, the impact of this change would have been a reduction in gross interest rate derivative assets of $3.6 billion and gross interest rate derivative liabilities of $1.9 billion, and a corresponding decrease in counterparty and cash collateral netting, with no impact to the consolidated statements of financial condition.

- On November 19, 2018, a clearing organization revised its rules to calculate notional amounts for certain exchange-traded derivative contracts. The impact of this rule change, as of the effective date, was a decrease in the notional amounts of derivative contracts of approximately $7 trillion, substantially all of which related to interest rate derivatives, with no change to their fair value.

Valuation Techniques for Derivatives

The firm's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations). Price transparency of derivatives can generally be characterized by product type, as described below.

- **Interest Rate.** In general, the key inputs used to value interest rate derivatives are transparent, even for most long-dated contracts. Interest rate swaps and options denominated in the currencies of leading industrialized nations are characterized by high trading volumes and tight bid/offer spreads. Interest rate derivatives that reference indices, such as an inflation index, or the shape of the yield curve (e.g., 10-year swap rate vs. 2-year swap rate) are more complex, but the key inputs are generally observable.
- **Credit.** Price transparency for credit default swaps, including both single names and baskets of credits, varies by market and underlying reference entity or obligation. Credit default swaps that reference indices, large corporates and major sovereigns generally exhibit the most price transparency. For credit default swaps with other underliers, price transparency varies based on credit rating, the cost of borrowing the underlying reference obligations, and the availability of the underlying reference obligations for delivery upon the default of the issuer. Credit default swaps that reference loans, asset-backed securities and emerging market debt instruments tend to have less price transparency than those that reference corporate bonds. In addition, more complex credit derivatives, such as those sensitive to the correlation between two or more underlying reference obligations, generally have less price transparency.
- **Currency.** Prices for currency derivatives based on the exchange rates of leading industrialized nations, including those with longer tenors, are generally transparent. The primary difference between the price transparency of developed and emerging market currency derivatives is that emerging markets tend to be observable for contracts with shorter tenors.
- **Commodity.** Commodity derivatives include transactions referenced to energy (e.g., oil and natural gas), metals (e.g., precious and base) and soft commodities (e.g., agricultural). Price transparency varies based on the underlying commodity, delivery location, tenor and product quality (e.g., diesel fuel compared to unleaded gasoline). In general, price transparency for commodity derivatives is greater for contracts with shorter tenors and contracts that are more closely aligned with major and/or benchmark commodity indices.
- **Equity.** Price transparency for equity derivatives varies by market and underlier. Options on indices and the common stock of corporates included in major equity indices exhibit the most price transparency. Equity derivatives generally have observable market prices, except for contracts with long tenors or reference prices that differ significantly from current market prices. More complex equity derivatives, such as those sensitive to the correlation between two or more individual stocks, generally have less price transparency.

Liquidity is essential to observability of all product types. If transaction volumes decline, previously transparent prices and other inputs may become unobservable. Conversely, even highly structured products may at times have trading volumes large enough to provide observability of prices and other inputs. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Derivatives

Level 1 derivatives include short-term contracts for future delivery of securities when the underlying security is a level 1 instrument, and exchange-traded derivatives if they are actively traded and are valued at their quoted market price.

Level 2 Derivatives

Level 2 derivatives include OTC derivatives for which all significant valuation inputs are corroborated by market evidence and exchange-traded derivatives that are not actively traded and/or that are valued using models that calibrate to market-clearing levels of OTC derivatives.

The selection of a particular model to value a derivative depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability of pricing information in the market. For derivatives that trade in liquid markets, model selection does not involve significant management judgment because outputs of models can be calibrated to market-clearing levels.

Valuation models require a variety of inputs, such as contractual terms, market prices, yield curves, discount rates (including those derived from interest rates on collateral received and posted as specified in credit support agreements for collateralized derivatives), credit curves, measures of volatility, prepayment rates, loss severity rates and correlations of such inputs. Significant inputs to the valuations of level 2 derivatives can be verified to market transactions, broker or dealer quotations or other alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Level 3 Derivatives

Level 3 derivatives are valued using models which utilize observable level 1 and/or level 2 inputs, as well as unobservable level 3 inputs. The significant unobservable inputs used to value the firm's level 3 derivatives are described below.

- For level 3 interest rate and currency derivatives, significant unobservable inputs include correlations of certain currencies and interest rates (e.g., the correlation between Euro inflation and Euro interest rates). In addition, for level 3 interest rate derivatives, significant unobservable inputs include specific interest rate volatilities.
- For level 3 credit derivatives, significant unobservable inputs include illiquid credit spreads and upfront credit points, which are unique to specific reference obligations and reference entities, recovery rates and certain correlations required to value credit derivatives (e.g., the likelihood of default of the underlying reference obligation relative to one another).
- For level 3 commodity derivatives, significant unobservable inputs include volatilities for options with strike prices that differ significantly from current market prices and prices or spreads for certain products for which the product quality or physical location of the commodity is not aligned with benchmark indices.
- For level 3 equity derivatives, significant unobservable inputs generally include equity volatility inputs for options that are long-dated and/or have strike prices that differ significantly from current market prices. In addition, the valuation of certain structured trades requires the use of level 3 correlation inputs, such as the correlation of the price performance of two or more individual stocks or the correlation of the price performance for a basket of stocks to another asset class such as commodities.

Subsequent to the initial valuation of a level 3 derivative, the firm updates the level 1 and level 2 inputs to reflect observable market changes and any resulting gains and losses are classified in level 3. Level 3 inputs are changed when corroborated by evidence such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data. In circumstances where the firm cannot verify the model value by reference to market transactions, it is possible that a different valuation model could produce a materially different estimate of fair value. See below for further information about significant unobservable inputs used in the valuation of level 3 derivatives.

Valuation Adjustments

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the appropriate exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralized portion of derivative portfolios. The firm also makes funding valuation adjustments to collateralized derivatives where the terms of the agreement do not permit the firm to deliver or repledge collateral received. Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels.

In addition, for derivatives that include significant unobservable inputs, the firm makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

Fair Value of Derivatives by Level

The table below presents the fair value of derivatives on a gross basis by level and major product type, as well as the impact of netting.

$ in millions	Level 1	Level 2	Level 3	Total
As of December 2018				
Assets				
Interest rates	**$ 12**	**$ 235,680**	**$ 408**	**$ 236,100**
Credit	**–**	**15,992**	**3,444**	**19,436**
Currencies	**–**	**85,837**	**681**	**86,518**
Commodities	**–**	**17,193**	**431**	**17,624**
Equities	**10**	**47,168**	**940**	**48,118**
Gross fair value	**22**	**401,870**	**5,904**	**407,796**
Counterparty netting in levels	**–**	**(312,611)**	**(956)**	**(313,567)**
Subtotal	**$ 22**	**$ 89,259**	**$ 4,948**	**$ 94,229**
Cross-level counterparty netting				**(659)**
Cash collateral netting				**(48,724)**
Net fair value				**$ 44,846**
Liabilities				
Interest rates	**$(24)**	**$(215,662)**	**$ (517)**	**$(216,203)**
Credit	**–**	**(16,529)**	**(1,772)**	**(18,301)**
Currencies	**–**	**(88,663)**	**(220)**	**(88,883)**
Commodities	**–**	**(19,808)**	**(319)**	**(20,127)**
Equities	**(37)**	**(49,910)**	**(2,486)**	**(52,433)**
Gross fair value	**(61)**	**(390,572)**	**(5,314)**	**(395,947)**
Counterparty netting in levels	**–**	**312,611**	**956**	**313,567**
Subtotal	**$(61)**	**$ (77,961)**	**$(4,358)**	**$ (82,380)**
Cross-level counterparty netting				**659**
Cash collateral netting				**39,127**
Net fair value				**$ (42,594)**
As of December 2017				
Assets				
Interest rates	$ 18	$ 282,933	$ 311	$ 283,262
Credit	–	19,053	3,640	22,693
Currencies	–	95,401	140	95,541
Commodities	–	13,727	353	14,080
Equities	8	50,870	409	51,287
Gross fair value	26	461,984	4,853	466,863
Counterparty netting in levels	–	(362,109)	(1,051)	(363,160)
Subtotal	$ 26	$ 99,875	$ 3,802	$ 103,703
Cross-level counterparty netting				(894)
Cash collateral netting				(55,472)
Net fair value				$ 47,337
Liabilities				
Interest rates	$(28)	$(252,421)	$ (721)	$(253,170)
Credit	–	(19,135)	(2,135)	(21,270)
Currencies	–	(96,160)	(321)	(96,481)
Commodities	–	(15,842)	(306)	(16,148)
Equities	(28)	(53,902)	(1,658)	(55,588)
Gross fair value	(56)	(437,460)	(5,141)	(442,657)
Counterparty netting in levels	–	362,109	1,051	363,160
Subtotal	$(56)	$ (75,351)	$(4,090)	$ (79,497)
Cross-level counterparty netting				894
Cash collateral netting				38,972
Net fair value				$ (39,631)

In the table above:

- The gross fair values exclude the effects of both counterparty netting and collateral netting, and therefore are not representative of the firm's exposure.
- Counterparty netting is reflected in each level to the extent that receivable and payable balances are netted within the same level and is included in counterparty netting in levels. Where the counterparty netting is across levels, the netting is included in cross-level counterparty netting.
- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.

Significant Unobservable Inputs

The table below presents the amount of level 3 assets (liabilities), and ranges, averages and medians of significant unobservable inputs used to value level 3 derivatives.

	Level 3 Assets (Liabilities) and Range of Significant Unobservable Inputs (Average/Median) as of December	
$ in millions	**2018**	2017
Interest rates, net	**$(109)**	$(410)
Correlation	**(10)% to 86% (66%/64%)**	(10)% to 95% (71%/79%)
Volatility (bps)	**31 to 150 (74/65)**	31 to 150 (84/78)
Credit, net	**$1,672**	$1,505
Correlation	**N/A**	28% to 84% (61%/60%)
Credit spreads (bps)	**1 to 810 (109/63)**	1 to 633 (69/42)
Upfront credit points	**2 to 99 (44/40)**	0 to 97 (42/38)
Recovery rates	**25% to 70% (40%/40%)**	22% to 73% (68%/73%)
Currencies, net	**$461**	$(181)
Correlation	**10% to 70% (40%/36%)**	49% to 72% (61%/62%)
Commodities, net	**$112**	$47
Volatility	**10% to 75% (28%/27%)**	9% to 79% (24%/24%)
Natural gas spread	**$(2.32) to $4.68 ($(0.26)/$(0.30))**	$(2.38) to $3.34 ($(0.22)/$(0.12))
Oil spread	**$(3.44) to $16.62 ($4.53/$3.94)**	$(2.86) to $23.61 ($6.47/$2.35)
Equities, net	**$(1,546)**	$(1,249)
Correlation	**(68)% to 97% (48%/51%)**	(36)% to 94% (50%/52%)
Volatility	**3% to 102% (20%/18%)**	4% to 72% (24%/22%)

In the table above:

- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.
- Ranges represent the significant unobservable inputs that were used in the valuation of each type of derivative.
- Averages represent the arithmetic average of the inputs and are not weighted by the relative fair value or notional of the respective financial instruments. An average greater than the median indicates that the majority of inputs are below the average. For example, the difference between the average and the median for credit spreads indicates that the majority of the inputs fall in the lower end of the range.

- The ranges, averages and medians of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one derivative. For example, the highest correlation for interest rate derivatives is appropriate for valuing a specific interest rate derivative but may not be appropriate for valuing any other interest rate derivative. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of level 3 derivatives.
- Interest rates, currencies and equities derivatives are valued using option pricing models, credit derivatives are valued using option pricing, correlation and discounted cash flow models, and commodities derivatives are valued using option pricing and discounted cash flow models.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, option pricing models and discounted cash flows models are typically used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.
- Correlation was not significant to the valuation of level 3 credit derivatives as of December 2018.
- Correlation within currencies and equities includes cross-product type correlation.
- Natural gas spread represents the spread per million British thermal units of natural gas.
- Oil spread represents the spread per barrel of oil and refined products.

Range of Significant Unobservable Inputs

The following is information about the ranges of significant unobservable inputs used to value the firm's level 3 derivative instruments:

- **Correlation.** Ranges for correlation cover a variety of underliers both within one product type (e.g., equity index and equity single stock names) and across product types (e.g., correlation of an interest rate and a currency), as well as across regions. Generally, cross-product type correlation inputs are used to value more complex instruments and are lower than correlation inputs on assets within the same derivative product type.
- **Volatility.** Ranges for volatility cover numerous underliers across a variety of markets, maturities and strike prices. For example, volatility of equity indices is generally lower than volatility of single stocks.
- **Credit spreads, upfront credit points and recovery rates.** The ranges for credit spreads, upfront credit points and recovery rates cover a variety of underliers (index and single names), regions, sectors, maturities and credit qualities (high-yield and investment-grade). The broad range of this population gives rise to the width of the ranges of significant unobservable inputs.
- **Commodity prices and spreads.** The ranges for commodity prices and spreads cover variability in products, maturities and delivery locations.

Sensitivity of Fair Value Measurement to Changes in Significant Unobservable Inputs

The following is a description of the directional sensitivity of the firm's level 3 fair value measurements, as of both December 2018 and December 2017, to changes in significant unobservable inputs, in isolation:

- **Correlation.** In general, for contracts where the holder benefits from the convergence of the underlying asset or index prices (e.g., interest rates, credit spreads, foreign exchange rates, inflation rates and equity prices), an increase in correlation results in a higher fair value measurement.
- **Volatility.** In general, for purchased options, an increase in volatility results in a higher fair value measurement.
- **Credit spreads, upfront credit points and recovery rates.** In general, the fair value of purchased credit protection increases as credit spreads or upfront credit points increase or recovery rates decrease. Credit spreads, upfront credit points and recovery rates are strongly related to distinctive risk factors of the underlying reference obligations, which include reference entity-specific factors such as leverage, volatility and industry, market-based risk factors, such as borrowing costs or liquidity of the underlying reference obligation, and macroeconomic conditions.
- **Commodity prices and spreads.** In general, for contracts where the holder is receiving a commodity, an increase in the spread (price difference from a benchmark index due to differences in quality or delivery location) or price results in a higher fair value measurement.

Due to the distinctive nature of each of the firm's level 3 derivatives, the interrelationship of inputs is not necessarily uniform within each product type.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for level 3 derivatives.

	Year Ended December	
$ in millions	**2018**	2017
Total level 3 derivatives		
Beginning balance	**$ (288)**	$(1,217)
Net realized gains/(losses)	**(113)**	(119)
Net unrealized gains/(losses)	**1,251**	(436)
Purchases	**612**	301
Sales	**(1,510)**	(611)
Settlements	**573**	1,891
Transfers into level 3	**34**	(39)
Transfers out of level 3	**31**	(58)
Ending balance	**$ 590**	$ (288)

In the table above:

- Changes in fair value are presented for all derivative assets and liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relates to instruments that were still held at period-end.
- Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. If a derivative was transferred into level 3 during a reporting period, its entire gain or loss for the period is classified in level 3.
- Positive amounts for transfers into level 3 and negative amounts for transfers out of level 3 represent net transfers of derivative assets. Negative amounts for transfers into level 3 and positive amounts for transfers out of level 3 represent net transfers of derivative liabilities.
- A derivative with level 1 and/or level 2 inputs is classified in level 3 in its entirety if it has at least one significant level 3 input.
- If there is one significant level 3 input, the entire gain or loss from adjusting only observable inputs (i.e., level 1 and level 2 inputs) is classified in level 3.
- Gains or losses that have been classified in level 3 resulting from changes in level 1 or level 2 inputs are frequently offset by gains or losses attributable to level 1 or level 2 derivatives and/or level 1, level 2 and level 3 cash instruments. As a result, gains/(losses) included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.

The table below disaggregates, by major product type, the information for level 3 derivatives included in the summary table above.

	Year Ended December	
$ in millions	**2018**	2017
Interest rates, net		
Beginning balance	**$ (410)**	$ (381)
Net realized gains/(losses)	**(51)**	(62)
Net unrealized gains/(losses)	**122**	20
Purchases	**8**	4
Sales	**(2)**	(14)
Settlements	**171**	30
Transfers into level 3	**(9)**	(12)
Transfers out of level 3	**62**	5
Ending balance	**$ (109)**	$ (410)
Credit, net		
Beginning balance	**$ 1,505**	$ 2,504
Net realized gains/(losses)	**(23)**	42
Net unrealized gains/(losses)	**2**	(188)
Purchases	**53**	20
Sales	**(65)**	(27)
Settlements	**244**	(739)
Transfers into level 3	**(35)**	3
Transfers out of level 3	**(9)**	(110)
Ending balance	**$ 1,672**	$ 1,505
Currencies, net		
Beginning balance	**$ (181)**	$ 3
Net realized gains/(losses)	**(51)**	(39)
Net unrealized gains/(losses)	**372**	(192)
Purchases	**36**	4
Sales	**(25)**	(3)
Settlements	**212**	62
Transfers into level 3	**101**	(9)
Transfers out of level 3	**(3)**	(7)
Ending balance	**$ 461**	$ (181)
Commodities, net		
Beginning balance	**$ 47**	$ 73
Net realized gains/(losses)	**18**	(4)
Net unrealized gains/(losses)	**61**	216
Purchases	**42**	102
Sales	**(64)**	(301)
Settlements	**12**	(27)
Transfers into level 3	**21**	(25)
Transfers out of level 3	**(25)**	13
Ending balance	**$ 112**	$ 47
Equities, net		
Beginning balance	**$(1,249)**	$(3,416)
Net realized gains/(losses)	**(6)**	(56)
Net unrealized gains/(losses)	**694**	(292)
Purchases	**473**	171
Sales	**(1,354)**	(266)
Settlements	**(66)**	2,565
Transfers into level 3	**(44)**	4
Transfers out of level 3	**6**	41
Ending balance	**$(1,546)**	$(1,249)

Level 3 Rollforward Commentary

Year Ended December 2018. The net realized and unrealized gains on level 3 derivatives of $1.14 billion (reflecting $113 million of net realized losses and $1.25 billion of net unrealized gains) for 2018 included gains of $1.11 billion reported in market making and $28 million reported in other principal transactions.

The net unrealized gains on level 3 derivatives for 2018 were primarily attributable to gains on certain equity derivatives, reflecting the impact of a decrease in certain equity prices and gains on certain currency derivatives, primarily reflecting the impact of changes in foreign exchange rates.

Both transfers into level 3 derivatives and transfers out of level 3 derivatives during 2018 were not material.

Year Ended December 2017. The net realized and unrealized losses on level 3 derivatives of $555 million (reflecting $119 million of net realized losses and $436 million of net unrealized losses) for 2017 included losses of $90 million reported in market making and $465 million reported in other principal transactions.

The net unrealized losses on level 3 derivatives for 2017 were primarily attributable to losses on certain equity derivatives, reflecting the impact of changes in equity prices, losses on certain currency derivatives, primarily reflecting the impact of changes in foreign exchanges rates, and losses on certain credit derivatives, reflecting the impact of tighter credit spreads, partially offset by gains on certain commodity derivatives, reflecting the impact of an increase in commodity prices.

Transfers into level 3 derivatives during 2017 were not material.

Transfers out of level 3 derivatives during 2017 primarily reflected transfers of certain credit derivatives assets to level 2, principally due to certain unobservable inputs no longer being significant to the valuation of these derivatives.

OTC Derivatives

The table below presents the fair values of OTC derivative assets and liabilities by tenor and major product type.

$ in millions	Less than 1 Year	1 - 5 Years	Greater than 5 Years	Total
As of December 2018				
Assets				
Interest rates	**$ 2,810**	**$13,177**	**$47,426**	**$ 63,413**
Credit	**807**	**3,676**	**3,364**	**7,847**
Currencies	**10,976**	**5,076**	**6,486**	**22,538**
Commodities	**4,978**	**2,101**	**145**	**7,224**
Equities	**4,962**	**5,244**	**1,329**	**11,535**
Counterparty netting in tenors	**(3,409)**	**(3,883)**	**(2,822)**	**(10,114)**
Subtotal	**$21,124**	**$25,391**	**$55,928**	**$102,443**
Cross-tenor counterparty netting				**(13,143)**
Cash collateral netting				**(48,724)**
Total OTC derivative assets				**$40,576**
Liabilities				
Interest rates	**$ 4,193**	**$ 9,153**	**$29,377**	**$ 42,723**
Credit	**1,127**	**4,173**	**1,412**	**6,712**
Currencies	**13,553**	**6,871**	**4,474**	**24,898**
Commodities	**4,271**	**2,663**	**3,145**	**10,079**
Equities	**9,278**	**5,178**	**3,060**	**17,516**
Counterparty netting in tenors	**(3,409)**	**(3,883)**	**(2,822)**	**(10,114)**
Subtotal	**$29,013**	**$24,155**	**$38,646**	**$ 91,814**
Cross-tenor counterparty netting				**(13,143)**
Cash collateral netting				**(39,127)**
Total OTC derivative liabilities				**$ 39,544**
As of December 2017				
Assets				
Interest rates	$ 3,717	$15,445	$57,200	$ 76,362
Credit	760	4,079	3,338	8,177
Currencies	12,184	6,219	7,245	25,648
Commodities	3,175	2,526	181	5,882
Equities	4,969	5,607	1,387	11,963
Counterparty netting in tenors	(3,719)	(4,594)	(2,807)	(11,120)
Subtotal	$21,086	$29,282	$66,544	$116,912
Cross-tenor counterparty netting				(16,404)
Cash collateral netting				(55,472)
Total OTC derivative assets				$ 45,036
Liabilities				
Interest rates	$ 4,517	$ 8,471	$33,193	$46,181
Credit	2,078	3,588	1,088	6,754
Currencies	14,326	7,119	4,802	26,247
Commodities	3,599	2,167	2,465	8,231
Equities	6,453	6,647	3,381	16,481
Counterparty netting in tenors	(3,719)	(4,594)	(2,807)	(11,120)
Subtotal	$27,254	$23,398	$42,122	$ 92,774
Cross-tenor counterparty netting				(16,404)
Cash collateral netting				(38,972)
Total OTC derivative liabilities				$ 37,398

In the table above:

- Tenor is based on remaining contractual maturity.
- Counterparty netting within the same product type and tenor category is included within such product type and tenor category.
- Counterparty netting across product types within the same tenor category is included in counterparty netting in tenors. Where the counterparty netting is across tenor categories, the netting is included in cross-tenor counterparty netting.

Credit Derivatives

The firm enters into a broad array of credit derivatives in locations around the world to facilitate client transactions and to manage the credit risk associated with market-making and investing and lending activities. Credit derivatives are actively managed based on the firm's net risk position. Credit derivatives are generally individually negotiated contracts and can have various settlement and payment conventions. Credit events include failure to pay, bankruptcy, acceleration of indebtedness, restructuring, repudiation and dissolution of the reference entity.

The firm enters into the following types of credit derivatives:

- **Credit Default Swaps.** Single-name credit default swaps protect the buyer against the loss of principal on one or more bonds, loans or mortgages (reference obligations) in the event the issuer of the reference obligations suffers a credit event. The buyer of protection pays an initial or periodic premium to the seller and receives protection for the period of the contract. If there is no credit event, as defined in the contract, the seller of protection makes no payments to the buyer. If a credit event occurs, the seller of protection is required to make a payment to the buyer, calculated according to the terms of the contract.
- **Credit Options.** In a credit option, the option writer assumes the obligation to purchase or sell a reference obligation at a specified price or credit spread. The option purchaser buys the right, but does not assume the obligation, to sell the reference obligation to, or purchase it from, the option writer. The payments on credit options depend either on a particular credit spread or the price of the reference obligation.
- **Credit Indices, Baskets and Tranches.** Credit derivatives may reference a basket of single-name credit default swaps or a broad-based index. If a credit event occurs in one of the underlying reference obligations, the protection seller pays the protection buyer. The payment is typically a pro-rata portion of the transaction's total notional amount based on the underlying defaulted reference obligation. In certain transactions, the credit risk of a basket or index is separated into various portions (tranches), each having different levels of subordination. The most junior tranches cover initial defaults and once losses exceed the notional amount of these junior tranches, any excess loss is covered by the next most senior tranche.
- **Total Return Swaps.** A total return swap transfers the risks relating to economic performance of a reference obligation from the protection buyer to the protection seller. Typically, the protection buyer receives a floating rate of interest and protection against any reduction in fair value of the reference obligation, and the protection seller receives the cash flows associated with the reference obligation, plus any increase in the fair value of the reference obligation.

The firm economically hedges its exposure to written credit derivatives primarily by entering into offsetting purchased credit derivatives with identical underliers. Substantially all of the firm's purchased credit derivative transactions are with financial institutions and are subject to stringent collateral thresholds. In addition, upon the occurrence of a specified trigger event, the firm may take possession of the reference obligations underlying a particular written credit derivative, and consequently may, upon liquidation of the reference obligations, recover amounts on the underlying reference obligations in the event of default.

As of December 2018, written credit derivatives had a total gross notional amount of $554.17 billion and purchased credit derivatives had a total gross notional amount of $603.00 billion, for total net notional purchased protection of $48.83 billion. As of December 2017, written credit derivatives had a total gross notional amount of $611.04 billion and purchased credit derivatives had a total gross notional amount of $643.37 billion, for total net notional purchased protection of $32.33 billion. Substantially all of the firm's written and purchased credit derivatives are credit default swaps.

The table below presents information about credit derivatives.

	Credit Spread on Underlier (basis points)				
$ in millions	0 - 250	251 - 500	501 - 1,000	Greater than 1,000	Total
As of December 2018					
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	**$145,828**	**$ 9,763**	**$ 1,151**	**$ 3,848**	**$160,590**
1 – 5 years	**298,228**	**21,100**	**13,835**	**7,520**	**340,683**
Greater than 5 years	**45,690**	**5,966**	**1,121**	**122**	**52,899**
Total	**$489,746**	**$36,829**	**$16,107**	**$11,490**	**$554,172**
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	**$413,445**	**$25,373**	**$14,243**	**$ 8,841**	**$461,902**
Other	**115,754**	**14,273**	**7,555**	**3,513**	**141,095**
Fair Value of Written Credit Derivatives					
Asset	**$ 8,656**	**$ 543**	**$ 95**	**$ 80**	**$ 9,374**
Liability	**1,990**	**1,415**	**1,199**	**3,368**	**7,972**
Net asset/(liability)	**$ 6,666**	**$ (872)**	**$ (1,104)**	**$ (3,288)**	**$ 1,402**
As of December 2017					
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	$182,446	$ 8,531	$ 705	$ 4,067	$195,749
1 – 5 years	335,872	10,201	8,747	7,553	362,373
Greater than 5 years	49,440	2,142	817	519	52,918
Total	$567,758	$20,874	$10,269	$12,139	$611,040
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	$492,325	$13,424	$ 9,395	$10,663	$525,807
Other	99,861	14,483	1,777	1,442	117,563
Fair Value of Written Credit Derivatives					
Asset	$ 14,317	$ 513	$ 208	$ 155	$ 15,193
Liability	896	402	752	3,920	5,970
Net asset/(liability)	$ 13,421	$ 111	$ (544)	$ (3,765)	$ 9,223

In the table above:

- Fair values exclude the effects of both netting of receivable balances with payable balances under enforceable netting agreements, and netting of cash received or posted under enforceable credit support agreements, and therefore are not representative of the firm's credit exposure.
- Tenor is based on remaining contractual maturity.
- The credit spread on the underlier, together with the tenor of the contract, are indicators of payment/performance risk. The firm is less likely to pay or otherwise be required to perform where the credit spread and the tenor are lower.
- Offsetting purchased credit derivatives represent the notional amount of purchased credit derivatives that economically hedge written credit derivatives with identical underliers.
- Other purchased credit derivatives represent the notional amount of all other purchased credit derivatives not included in offsetting.

Impact of Credit Spreads on Derivatives

On an ongoing basis, the firm realizes gains or losses relating to changes in credit risk through the unwind of derivative contracts and changes in credit mitigants.

The net gains/(losses), including hedges, attributable to the impact of changes in credit exposure and credit spreads (counterparty and the firm's) on derivatives was $371 million for 2018, $66 million for 2017 and $85 million for 2016.

Bifurcated Embedded Derivatives

The table below presents the fair value and the notional amount of derivatives that have been bifurcated from their related borrowings.

	As of December	
$ in millions	**2018**	2017
Fair value of assets	**$ 980**	$ 882
Fair value of liabilities	**1,297**	1,200
Net liability	**$ 317**	$ 318
Notional amount	**$10,229**	$9,578

In the table above, these derivatives, which are recorded at fair value, primarily consist of interest rate, equity and commodity products and are included in unsecured short-term borrowings and unsecured long-term borrowings with the related borrowings. See Note 8 for further information.

Derivatives with Credit-Related Contingent Features

Certain of the firm's derivatives have been transacted under bilateral agreements with counterparties who may require the firm to post collateral or terminate the transactions based on changes in the firm's credit ratings. The firm assesses the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies. A downgrade by any one rating agency, depending on the agency's relative ratings of the firm at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies.

The table below presents information about net derivative liabilities under such bilateral agreements (excluding application of collateral posted), the related fair value of collateral posted and the additional collateral or termination payments that could have been called by counterparties in the event of a one-notch and two-notch downgrade in the firm's credit ratings.

	As of December	
$ in millions	**2018**	2017
Net derivative liabilities under bilateral agreements	**$29,583**	$29,877
Collateral posted	**$24,393**	$25,329
Additional collateral or termination payments:		
One-notch downgrade	**$ 262**	$ 358
Two-notch downgrade	**$ 959**	$ 1,856

Hedge Accounting

The firm applies hedge accounting for (i) certain interest rate swaps used to manage the interest rate exposure of certain fixed-rate unsecured long-term and short-term borrowings and certain fixed-rate certificates of deposit and (ii) certain foreign currency forward contracts and foreign currency-denominated debt used to manage foreign currency exposures on the firm's net investment in certain non-U.S. operations.

To qualify for hedge accounting, the hedging instrument must be highly effective at reducing the risk from the exposure being hedged. Additionally, the firm must formally document the hedging relationship at inception and assess the hedging relationship at least on a quarterly basis to ensure the hedging instrument continues to be highly effective over the life of the hedging relationship.

Fair Value Hedges

The firm designates certain interest rate swaps as fair value hedges of certain fixed-rate unsecured long-term and short-term debt and fixed-rate certificates of deposit. These interest rate swaps hedge changes in fair value attributable to the designated benchmark interest rate (e.g., London Interbank Offered Rate (LIBOR) or Overnight Index Swap Rate), effectively converting a substantial portion of fixed-rate obligations into floating-rate obligations.

The firm applies a statistical method that utilizes regression analysis when assessing the effectiveness of its fair value hedging relationships in achieving offsetting changes in the fair values of the hedging instrument and the risk being hedged (i.e., interest rate risk). An interest rate swap is considered highly effective in offsetting changes in fair value attributable to changes in the hedged risk when the regression analysis results in a coefficient of determination of 80% or greater and a slope between 80% and 125%.

For qualifying fair value hedges, gains or losses on derivatives are included in interest expense. The change in fair value of the hedged item attributable to the risk being hedged is reported as an adjustment to its carrying value (hedging adjustment) and is also included in interest expense. When a derivative is no longer designated as a hedge, any remaining difference between the carrying value and par value of the hedged item is amortized to interest expense over the remaining life of the hedged item using the effective interest method. See Note 23 for further information about interest income and interest expense.

The table below presents the gains/(losses) from interest rate derivatives accounted for as hedges and the related hedged borrowings and deposits, and total interest expense.

	Year Ended December		
$ in millions	**2018**	2017	2016
Interest rate hedges	**$ (1,854)**	$ (2,867)	$(1,480)
Hedged borrowings and deposits	**$ 1,295**	$ 2,183	$ 834
Interest expense	**$15,912**	$10,181	$ 7,104

In the table above:

- The difference between gains/(losses) from interest rate hedges and hedged borrowings and deposits was primarily due to the amortization of prepaid credit spreads resulting from the passage of time.
- Hedge ineffectiveness was $(684) million for 2017 and $(646) million for 2016.

The table below presents the carrying value of the hedged items that are currently designated in a hedging relationship and the related cumulative hedging adjustment (increase/(decrease)) from current and prior hedging relationships included in such carrying values.

	As of December 2018	
$ in millions	**Carrying Value**	**Cumulative Hedging Adjustment**
Deposits	**$11,924**	**$ (156)**
Unsecured short-term borrowings	**$ 4,450**	**$ (12)**
Unsecured long-term borrowings	**$68,839**	**$2,759**

In the table above, cumulative hedging adjustment included $1.74 billion of hedging adjustments from prior hedging relationships that were de-designated and substantially all were related to unsecured long-term borrowings.

In addition, as of December 2018, cumulative hedging adjustments for items no longer designated in a hedging relationship were $1.51 billion and substantially all were related to unsecured long-term borrowings.

Net Investment Hedges

The firm seeks to reduce the impact of fluctuations in foreign exchange rates on its net investments in certain non-U.S. operations through the use of foreign currency forward contracts and foreign currency-denominated debt. For foreign currency forward contracts designated as hedges, the effectiveness of the hedge is assessed based on the overall changes in the fair value of the forward contracts (i.e., based on changes in forward rates). For foreign currency-denominated debt designated as a hedge, the effectiveness of the hedge is assessed based on changes in spot rates.

Beginning in January 2018, in accordance with ASU No. 2017-12 for qualifying net investment hedges, all gains or losses on the hedging instruments are included in currency translation. Prior to January 2018, gains or losses on the hedging instruments, only to the extent effective, were included in currency translation.

The table below presents the gains/(losses) from net investment hedging.

	Year Ended December		
$ in millions	**2018**	2017	2016
Hedges:			
Foreign currency forward contract	**$577**	$(805)	$135
Foreign currency-denominated debt	**$ (50)**	$ (67)	$ (85)

Gains or losses on individual net investments in non-U.S. operations are reclassified to earnings from accumulated other comprehensive income when such net investments are sold or substantially liquidated. The gross and net gains and losses on hedges and the related net investments in non-U.S. operations reclassified to earnings from accumulated other comprehensive income were not material for 2018. The net gain reclassified to earnings from accumulated other comprehensive income was $41 million (reflecting a gain of $205 million related to hedges and a loss of $164 million on the related net investments in non-U.S. operations) for 2017 and $28 million (reflecting a gain of $167 million related to hedges and a loss of $139 million on the related net investments in non-U.S. operations) for 2016. The gain/(loss) related to ineffectiveness was not material for 2017 or 2016.

The firm had designated $1.99 billion as of December 2018 and $1.81 billion as of December 2017 of foreign currency-denominated debt, included in unsecured long-term borrowings and unsecured short-term borrowings, as hedges of net investments in non-U.S. subsidiaries.

Note 8.
Fair Value Option

Other Financial Assets and Financial Liabilities at Fair Value

In addition to cash and derivative instruments included in financial instruments owned and financial instruments sold, but not yet purchased, the firm accounts for certain of its other financial assets and financial liabilities at fair value, substantially all under the fair value option. The primary reasons for electing the fair value option are to:

- Reflect economic events in earnings on a timely basis;
- Mitigate volatility in earnings from using different measurement attributes (e.g., transfers of financial instruments owned accounted for as financings are recorded at fair value, whereas the related secured financing would be recorded on an accrual basis absent electing the fair value option); and
- Address simplification and cost-benefit considerations (e.g., accounting for hybrid financial instruments at fair value in their entirety versus bifurcation of embedded derivatives and hedge accounting for debt hosts).

Hybrid financial instruments are instruments that contain bifurcatable embedded derivatives and do not require settlement by physical delivery of nonfinancial assets (e.g., physical commodities). If the firm elects to bifurcate the embedded derivative from the associated debt, the derivative is accounted for at fair value and the host contract is accounted for at amortized cost, adjusted for the effective portion of any fair value hedges. If the firm does not elect to bifurcate, the entire hybrid financial instrument is accounted for at fair value under the fair value option.

Other financial assets and financial liabilities accounted for at fair value under the fair value option include:

- Repurchase agreements and substantially all resale agreements;
- Securities borrowed and loaned in Fixed Income, Currency and Commodities Client Execution (FICC Client Execution);
- Substantially all other secured financings, including transfers of assets accounted for as financings;
- Certain unsecured short-term and long-term borrowings, substantially all of which are hybrid financial instruments;
- Certain customer and other receivables, including transfers of assets accounted for as secured loans and certain margin loans; and
- Certain time deposits (deposits with no stated maturity are not eligible for a fair value option election), including structured certificates of deposit, which are hybrid financial instruments.

Fair Value of Other Financial Assets and Financial Liabilities by Level

The table below presents, by level within the fair value hierarchy, other financial assets and financial liabilities at fair value, substantially all of which are accounted for at fair value under the fair value option.

$ in millions	Level 1	Level 2	Level 3	Total
As of December 2018				
Assets				
Resale agreements	**$ –**	**$ 139,220**	**$ –**	**$ 139,220**
Securities borrowed	**–**	**23,142**	**–**	**23,142**
Customer and other receivables	**–**	**3,183**	**6**	**3,189**
Total	**$ –**	**$ 165,545**	**$ 6**	**$ 165,551**
Liabilities				
Deposits	**$ –**	**$ (17,892)**	**$ (3,168)**	**$ (21,060)**
Repurchase agreements	**–**	**(78,694)**	**(29)**	**(78,723)**
Securities loaned	**–**	**(3,241)**	**–**	**(3,241)**
Other secured financings	**–**	**(20,734)**	**(170)**	**(20,904)**
Unsecured borrowings:				
Short-term	**–**	**(12,887)**	**(4,076)**	**(16,963)**
Long-term	**–**	**(34,761)**	**(11,823)**	**(46,584)**
Other liabilities	**–**	**(1)**	**(131)**	**(132)**
Total	**$ –**	**$(168,210)**	**$(19,397)**	**$(187,607)**
As of December 2017				
Assets				
Resale agreements	$ –	$ 120,420	$ –	$ 120,420
Securities borrowed	–	78,189	–	78,189
Customer and other receivables	–	3,522	4	3,526
Total	$ –	$ 202,131	$ 4	$ 202,135
Liabilities				
Deposits	$ –	$ (19,934)	$ (2,968)	$ (22,902)
Repurchase agreements	–	(84,681)	(37)	(84,718)
Securities loaned	–	(5,357)	–	(5,357)
Other secured financings	–	(23,956)	(389)	(24,345)
Unsecured borrowings:				
Short-term	–	(12,310)	(4,594)	(16,904)
Long-term	–	(31,204)	(7,434)	(38,638)
Other liabilities	–	(228)	(40)	(268)
Total	$ –	$(177,670)	$(15,462)	$(193,132)

In the table above, other financial assets are shown as positive amounts and other financial liabilities are shown as negative amounts.

Valuation Techniques and Significant Inputs

Other financial assets and financial liabilities at fair value are generally valued based on discounted cash flow techniques, which incorporate inputs with reasonable levels of price transparency, and are generally classified in level 2 because the inputs are observable. Valuation adjustments may be made for liquidity and for counterparty and the firm's credit quality.

See below for information about the significant inputs used to value other financial assets and financial liabilities at fair value, including the ranges of significant unobservable inputs used to value the level 3 instruments within these categories. These ranges represent the significant unobservable inputs that were used in the valuation of each type of other financial assets and financial liabilities at fair value. The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one instrument. For example, the highest yield presented below for other secured financings is appropriate for valuing a specific agreement in that category but may not be appropriate for valuing any other agreements in that category. Accordingly, the ranges of inputs presented below do not represent uncertainty in, or possible ranges of, fair value measurements of the firm's level 3 other financial assets and financial liabilities.

Resale and Repurchase Agreements and Securities Borrowed and Loaned. The significant inputs to the valuation of resale and repurchase agreements and securities borrowed and loaned are funding spreads, the amount and timing of expected future cash flows and interest rates. As of both December 2018 and December 2017, the firm had no level 3 resale agreements, securities borrowed or securities loaned. As of both December 2018 and December 2017, the firm's level 3 repurchase agreements were not material. See Note 10 for further information about collateralized agreements and financings.

Other Secured Financings. The significant inputs to the valuation of other secured financings at fair value are the amount and timing of expected future cash flows, interest rates, funding spreads, the fair value of the collateral delivered by the firm (which is determined using the amount and timing of expected future cash flows, market prices, market yields and recovery assumptions) and the frequency of additional collateral calls. As of December 2018, the firm's level 3 other secured financings were not material. The ranges of significant unobservable inputs used to value level 3 other secured financings as of December 2017 are as follows:

- Yield: 0.6% to 13.0% (weighted average: 3.3%)
- Duration: 0.7 to 11.0 years (weighted average: 2.7 years)

Generally, increases in yield or duration, in isolation, would have resulted in a lower fair value measurement as of December 2017. Due to the distinctive nature of each of the firm's level 3 other secured financings, the interrelationship of inputs is not necessarily uniform across such financings. See Note 10 for further information about collateralized agreements and financings.

Unsecured Short-term and Long-term Borrowings. The significant inputs to the valuation of unsecured short-term and long-term borrowings at fair value are the amount and timing of expected future cash flows, interest rates, the credit spreads of the firm, as well as commodity prices in the case of prepaid commodity transactions. The inputs used to value the embedded derivative component of hybrid financial instruments are consistent with the inputs used to value the firm's other derivative instruments. See Note 7 for further information about derivatives, Note 15 for further information about unsecured short-term borrowings, and Note 16 for further information about long-term borrowings.

Certain of the firm's unsecured short-term and long-term borrowings are classified in level 3, substantially all of which are hybrid financial instruments. As the significant unobservable inputs used to value hybrid financial instruments primarily relate to the embedded derivative component of these borrowings, these inputs are incorporated in the firm's derivative disclosures related to unobservable inputs in Note 7.

Customer and Other Receivables. Customer and other receivables at fair value primarily consist of prepaid commodity transactions and transfers of assets accounted for as secured loans rather than purchases. The significant inputs to the valuation of such receivables are commodity prices, interest rates, the amount and timing of expected future cash flows and funding spreads. As of both December 2018 and December 2017, the firm's level 3 customer and other receivables were not material.

Deposits. The significant inputs to the valuation of time deposits are interest rates and the amount and timing of future cash flows. The inputs used to value the embedded derivative component of hybrid financial instruments are consistent with the inputs used to value the firm's other derivative instruments. See Note 7 for further information about derivatives and Note 14 for further information about deposits.

The firm's deposits that are classified in level 3 are hybrid financial instruments. As the significant unobservable inputs used to value hybrid financial instruments primarily relate to the embedded derivative component of these deposits, these inputs are incorporated in the firm's derivative disclosures related to unobservable inputs in Note 7.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for level 3 other financial assets and financial liabilities accounted for at fair value.

	Year Ended December	
$ in millions	**2018**	2017
Total other financial assets		
Beginning balance	**$ 4**	$ 55
Net unrealized gains/(losses)	**2**	–
Purchases	**–**	1
Settlements	**–**	(52)
Ending balance	**$ 6**	$ 4
Total other financial liabilities		
Beginning balance	**$(15,462)**	$(14,979)
Net realized gains/(losses)	**(491)**	(362)
Net unrealized gains/(losses)	**2,013**	(1,047)
Purchases	**–**	(3)
Sales	**–**	1
Issuances	**(11,935)**	(8,382)
Settlements	**7,010**	6,859
Transfers into level 3	**(1,416)**	(611)
Transfers out of level 3	**884**	3,062
Ending balance	**$(19,397)**	$(15,462)

In the table above:

- Changes in fair value are presented for all other financial assets and financial liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relates to instruments that were still held at period-end.
- Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. If a financial asset or financial liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is classified in level 3.
- For level 3 other financial assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 other financial liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Level 3 other financial assets and financial liabilities are frequently economically hedged with cash instruments and derivatives. Accordingly, gains or losses that are classified in level 3 can be partially offset by gains or losses attributable to level 1, 2 or 3 cash instruments or derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.

The table below disaggregates, by the consolidated statements of financial condition line items, the information for other financial liabilities included in the summary table above.

	Year Ended December	
$ in millions	**2018**	2017
Deposits		
Beginning balance	**$ (2,968)**	$(3,173)
Net realized gains/(losses)	**(25)**	(6)
Net unrealized gains/(losses)	**272**	(239)
Issuances	**(796)**	(661)
Settlements	**298**	232
Transfers into level 3	**(8)**	–
Transfers out of level 3	**59**	879
Ending balance	**$ (3,168)**	$(2,968)
Repurchase agreements		
Beginning balance	**$ (37)**	$ (66)
Net unrealized gains/(losses)	**2**	(1)
Settlements	**6**	30
Ending balance	**$ (29)**	$ (37)
Other secured financings		
Beginning balance	**$ (389)**	$ (557)
Net realized gains/(losses)	**(15)**	17
Net unrealized gains/(losses)	**11**	(40)
Purchases	**–**	(3)
Sales	**–**	1
Issuances	**(8)**	(32)
Settlements	**157**	171
Transfers into level 3	**(10)**	(12)
Transfers out of level 3	**84**	66
Ending balance	**$ (170)**	$ (389)
Unsecured short-term borrowings		
Beginning balance	**$ (4,594)**	$(3,896)
Net realized gains/(losses)	**(125)**	(332)
Net unrealized gains/(losses)	**558**	(230)
Issuances	**(4,564)**	(4,599)
Settlements	**4,481**	3,675
Transfers into level 3	**(72)**	(131)
Transfers out of level 3	**240**	919
Ending balance	**$ (4,076)**	$(4,594)
Unsecured long-term borrowings		
Beginning balance	**$ (7,434)**	$(7,225)
Net realized gains/(losses)	**(349)**	(60)
Net unrealized gains/(losses)	**1,262**	(559)
Issuances	**(6,545)**	(3,071)
Settlements	**2,068**	2,751
Transfers into level 3	**(1,326)**	(468)
Transfers out of level 3	**501**	1,198
Ending balance	**$(11,823)**	$(7,434)
Other liabilities		
Beginning balance	**$ (40)**	$ (62)
Net realized gains/(losses)	**23**	19
Net unrealized gains/(losses)	**(92)**	22
Issuances	**(22)**	(19)
Ending balance	**$ (131)**	$ (40)

Level 3 Rollforward Commentary

Year Ended December 2018. The net realized and unrealized gains on level 3 other financial liabilities of $1.52 billion (reflecting $491 million of net realized losses and $2.01 billion of net unrealized gains) for 2018 included gains/(losses) of $883 million reported in market making, $(1) million reported in other principal transactions and $(1) million reported in interest expense in the consolidated statements of earnings, and gains of $641 million reported in debt valuation adjustment in the consolidated statements of comprehensive income.

The net unrealized gains on level 3 other financial liabilities for 2018 primarily reflected gains on certain hybrid financial instruments included in unsecured long-term borrowings, principally due to the impact of wider credit spreads and increases in interest rates, and gains on certain hybrid financial instruments included in unsecured short-term borrowings, principally due to a decrease in global equity prices.

Transfers into level 3 other financial liabilities during 2018 primarily reflected transfers of certain hybrid financial instruments included in unsecured long-term borrowings from level 2, principally due to reduced transparency of certain inputs used to value these instruments as a result of a lack of market transactions in similar instruments.

Transfers out of level 3 other financial liabilities during 2018 primarily reflected transfers of certain hybrid financial instruments included in unsecured long-term and short-term borrowings to level 2, principally due to increased transparency of certain volatility and correlation inputs used to value these instruments.

Year Ended December 2017. The net realized and unrealized losses on level 3 other financial liabilities of $1.41 billion (reflecting $362 million of net realized losses and $1.05 billion of net unrealized losses) for 2017 included losses of $1.20 billion reported in market making, $45 million reported in other principal transactions and $10 million reported in interest expense in the consolidated statements of earnings, and losses of $149 million reported in debt valuation adjustment in the consolidated statements of comprehensive income.

The net unrealized losses on level 3 other financial liabilities for 2017 primarily reflected losses on certain hybrid financial instruments included in unsecured long-term and short-term borrowings, principally due to an increase in global equity prices and the impact of tighter credit spreads, and losses on certain hybrid financial instruments included in deposits, principally due to the impact of an increase in the market value of the underlying assets.

Transfers into level 3 other financial liabilities during 2017 primarily reflected transfers of certain hybrid financial instruments included in unsecured long-term borrowings from level 2, principally due to reduced transparency of volatility inputs used to value these instruments.

Transfers out of level 3 other financial liabilities during 2017 primarily reflected transfers of certain hybrid financial instruments included in unsecured long-term and short-term borrowings to level 2, principally due to increased transparency of certain inputs used to value these instruments as a result of market transactions in similar instruments, and transfers of certain hybrid financial instruments included in deposits to level 2, principally due to increased transparency of correlation and volatility inputs used to value these instruments.

Gains and Losses on Financial Assets and Financial Liabilities Accounted for at Fair Value Under the Fair Value Option

The table below presents the gains and losses recognized in earnings as a result of the firm electing to apply the fair value option to certain financial assets and financial liabilities.

	Year Ended December		
$ in millions	**2018**	2017	2016
Unsecured short-term borrowings	**$1,443**	$(2,585)	$(1,028)
Unsecured long-term borrowings	**926**	(1,357)	584
Other liabilities	**(68)**	222	(55)
Other	**349**	(620)	(630)
Total	**$2,650**	$(4,340)	$(1,129)

In the table above:

- Gains/(losses) are included in market making and other principal transactions.
- Gains/(losses) exclude contractual interest, which is included in interest income and interest expense, for all instruments other than hybrid financial instruments. See Note 23 for further information about interest income and interest expense.
- Gains/(losses) included in unsecured short-term and long-term borrowings were substantially all related to the embedded derivative component of hybrid financial instruments for 2018, 2017 and 2016. These gains and losses would have been recognized under other U.S. GAAP even if the firm had not elected to account for the entire hybrid financial instrument at fair value.
- Other primarily consists of gains/(losses) on customer and other receivables, deposits and other secured financings.

Excluding the gains and losses on the instruments accounted for at fair value under the fair value option described above, market making and other principal transactions primarily represent gains and losses on financial instruments owned and financial instruments sold, but not yet purchased.

Loans and Lending Commitments

The table below presents the difference between the aggregate fair value and the aggregate contractual principal amount for loans and long-term receivables for which the fair value option was elected.

	As of December	
$ in millions	**2018**	2017
Performing loans and long-term receivables		
Aggregate contractual principal in excess of fair value	**$1,837**	$ 952
Loans on nonaccrual status and/or more than 90 days past due		
Aggregate contractual principal in excess of fair value	**$5,260**	$5,266
Aggregate fair value of loans on nonaccrual status and/or more than 90 days past due	**$2,010**	$2,104

In the table above, the aggregate contractual principal amount of loans on nonaccrual status and/or more than 90 days past due (which excludes loans carried at zero fair value and considered uncollectible) exceeds the related fair value primarily because the firm regularly purchases loans, such as distressed loans, at values significantly below the contractual principal amounts.

The fair value of unfunded lending commitments for which the fair value option was elected was a liability of $45 million as of December 2018 and $31 million as of December 2017, and the related total contractual amount of these lending commitments was $7.72 billion as of December 2018 and $9.94 billion as of December 2017. See Note 18 for further information about lending commitments.

Long-Term Debt Instruments

The difference between the aggregate contractual principal amount and the related fair value of long-term other secured financings for which the fair value option was elected was not material as of both December 2018 and December 2017. The aggregate contractual principal amount of unsecured long-term borrowings for which the fair value option was elected exceeded the related fair value by $2.38 billion as of December 2018 and $1.69 billion as of December 2017. The amounts above include both principal- and non-principal-protected long-term borrowings.

Impact of Credit Spreads on Loans and Lending Commitments

The estimated net gain attributable to changes in instrument-specific credit spreads on loans and lending commitments for which the fair value option was elected was $211 million for 2018, $268 million for 2017 and $281 million for 2016. The firm generally calculates the fair value of loans and lending commitments for which the fair value option is elected by discounting future cash flows at a rate which incorporates the instrument-specific credit spreads. For floating-rate loans and lending commitments, substantially all changes in fair value are attributable to changes in instrument-specific credit spreads, whereas for fixed-rate loans and lending commitments, changes in fair value are also attributable to changes in interest rates.

Debt Valuation Adjustment

The firm calculates the fair value of financial liabilities for which the fair value option is elected by discounting future cash flows at a rate which incorporates the firm's credit spreads.

The table below presents information about the net DVA gains/(losses) on financial liabilities for which the fair value option was elected.

	Year Ended December		
$ in millions	**2018**	2017	2016
DVA (pre-tax)	**$3,389**	$(1,232)	$(844)
DVA (net of tax)	**$2,553**	$ (807)	$(544)

In the table above:

- DVA (net of tax) is included in debt valuation adjustment in the consolidated statements of comprehensive income.
- The gains/(losses) reclassified to earnings from accumulated other comprehensive loss upon extinguishment of such financial liabilities were not material for 2018, 2017 and 2016.

Note 9.
Loans Receivable

Loans receivable consists of loans held for investment that are accounted for at amortized cost net of allowance for loan losses. Interest on loans receivable is recognized over the life of the loan and is recorded on an accrual basis.

The table below presents information about loans receivable.

	As of December	
$ in millions	**2018**	2017
Corporate loans	**$37,283**	$30,749
PWM loans	**17,219**	16,591
Commercial real estate loans	**11,441**	7,987
Residential real estate loans	**7,284**	6,234
Consumer loans	**4,536**	1,912
Other loans	**3,893**	3,263
Total loans receivable, gross	**81,656**	66,736
Allowance for loan losses	**(1,066)**	(803)
Total loans receivable	**$80,590**	$65,933

The fair value of loans receivable was $80.74 billion as of December 2018 and $66.29 billion as of December 2017. Had these loans been carried at fair value and included in the fair value hierarchy, $40.64 billion as of December 2018 and $38.75 billion as of December 2017 would have been classified in level 2, and $40.10 billion as of December 2018 and $27.54 billion as of December 2017 would have been classified in level 3.

The following is a description of the captions in the table above:

- **Corporate Loans.** Corporate loans includes term loans, revolving lines of credit, letter of credit facilities and bridge loans, and are principally used for operating liquidity and general corporate purposes, or in connection with acquisitions. Corporate loans may be secured or unsecured, depending on the loan purpose, the risk profile of the borrower and other factors. Loans receivable related to the firm's relationship lending activities are reported within corporate loans.
- **Private Wealth Management (PWM) Loans.** PWM loans includes loans extended by the private bank. These loans are used to finance investments in both financial and nonfinancial assets, bridge cash flow timing gaps or provide liquidity for other needs. Substantially all of such loans are secured by securities or other assets.
- **Commercial Real Estate Loans.** Commercial real estate loans includes loans extended by the firm that are directly or indirectly secured by hotels, retail stores, multifamily housing complexes and commercial and industrial properties. Commercial real estate loans also includes loans purchased by the firm.

- **Residential Real Estate Loans.** Residential real estate loans includes loans extended by the firm to clients who warehouse assets that are directly or indirectly secured by residential real estate. Residential real estate loans also includes loans purchased by the firm.
- **Consumer Loans.** Consumer loans represents unsecured consumer loans originated by the firm.
- **Other Loans.** Other loans primarily includes loans extended to clients who warehouse assets that are directly or indirectly secured by consumer loans, including auto loans and private student loans. Other loans also includes unsecured consumer loans purchased by the firm.

Lending Commitments

The table below presents information about lending commitments that are held for investment and accounted for on an accrual basis.

	As of December	
$ in millions	**2018**	2017
Corporate	**$113,484**	$118,553
Other	**7,513**	5,951
Total	**$120,997**	$124,504

In the table above:

- Corporate lending commitments primarily relates to the firm's relationship lending activities.
- Other lending commitments primarily relates to lending commitments extended to clients who warehouse assets backed by real estate and other assets and in connection with commercial real estate financing.
- The carrying value of lending commitments were liabilities of $443 million (including allowance for losses of $286 million) as of December 2018 and $423 million (including allowance for losses of $274 million) as of December 2017.
- The estimated fair value of such lending commitments were liabilities of $3.78 billion as of December 2018 and $2.27 billion as of December 2017. Had these lending commitments been carried at fair value and included in the fair value hierarchy, $1.12 billion as of December 2018 and $772 million as of December 2017 would have been classified in level 2, and $2.66 billion as of December 2018 and $1.50 billion as of December 2017 would have been classified in level 3.

PCI Loans

Loans receivable includes PCI loans, which represent acquired loans or pools of loans with evidence of credit deterioration subsequent to their origination and where it is probable, at acquisition, that the firm will not be able to collect all contractually required payments. Loans acquired within the same reporting period, which have at least two common risk characteristics, one of which relates to their credit risk, are eligible to be pooled together and considered a single unit of account. PCI loans are initially recorded at the acquisition price and the difference between the acquisition price and the expected cash flows (accretable yield) is recognized as interest income over the life of such loans or pools of loans on an effective yield method. Expected cash flows on PCI loans are determined using various inputs and assumptions, including default rates, loss severities, recoveries, amount and timing of prepayments and other macroeconomic indicators.

The tables below present information about PCI loans.

	As of December	
$ in millions	**2018**	2017
Commercial real estate loans	**$ 581**	$1,116
Residential real estate loans	**2,457**	3,327
Other loans	**4**	10
Total gross carrying value	**$3,042**	$4,453
Total outstanding principal balance	**$5,576**	$9,512
Total accretable yield	**$ 459**	$ 662

	Year Ended December		
$ in millions	**2018**	2017	2016
Acquired during the period			
Fair value	**$ 839**	$1,769	$2,514
Expected cash flows	**$ 937**	$1,961	$2,818
Contractually required cash flows	**$1,881**	$4,092	$6,389

In the table above:

- Fair value, expected cash flows and contractually required cash flows were as of the acquisition date.
- Expected cash flows represents the cash flows expected to be received over the life of the loan or as a result of liquidation of the underlying collateral.
- Contractually required cash flows represents cash flows required to be repaid by the borrower over the life of the loan.

Credit Quality

Risk Assessment. The firm's risk assessment process includes evaluating the credit quality of its loans receivable. For loans receivable (excluding PCI and consumer loans) and lending commitments, the firm performs credit reviews which include initial and ongoing analyses of its borrowers. A credit review is an independent analysis of the capacity and willingness of a borrower to meet its financial obligations, resulting in an internal credit rating. The determination of internal credit ratings also incorporates assumptions with respect to the nature of and outlook for the borrower's industry and the economic environment. The firm also assigns a regulatory risk rating to such loans based on the definitions provided by the U.S. federal bank regulatory agencies.

The firm enters into economic hedges to mitigate credit risk on certain loans receivable and corporate lending commitments (both of which are held for investment) related to the firm's relationship lending activities. Such hedges are accounted for at fair value. See Note 18 for further information about these lending commitments and associated hedges.

The table below presents gross loans receivable (excluding PCI and consumer loans of $7.58 billion as of December 2018 and $6.37 billion as of December 2017) and lending commitments by an internally determined public rating agency equivalent and by regulatory risk rating.

$ in millions	Loans	Lending Commitments	Total
Credit Rating Equivalent As of December 2018			
Investment-grade	**$28,290**	**$ 81,959**	**$110,249**
Non-investment-grade	**45,788**	**39,038**	**84,826**
Total	**$74,078**	**$120,997**	**$195,075**
As of December 2017			
Investment-grade	$24,192	$ 89,409	$113,601
Non-investment-grade	36,179	35,095	71,274
Total	$60,371	$124,504	$184,875
Regulatory Risk Rating As of December 2018			
Non-criticized/pass	**$70,153**	**$117,923**	**$188,076**
Criticized	**3,925**	**3,074**	**6,999**
Total	**$74,078**	**$120,997**	**$195,075**
As of December 2017			
Non-criticized/pass	$56,720	$119,427	$176,147
Criticized	3,651	5,077	8,728
Total	$60,371	$124,504	$184,875

In the table above, non-criticized/pass loans and lending commitments represent loans and lending commitments that are performing and/or do not demonstrate adverse characteristics that are likely to result in a credit loss.

For consumer loans, an important credit-quality indicator is the Fair Isaac Corporation (FICO) credit score, which measures a borrower's creditworthiness by considering factors such as payment and credit history. FICO credit scores are refreshed periodically by the firm to assess the updated creditworthiness of the borrower.

The table below presents gross consumer loans receivable and the concentration by refreshed FICO credit score.

	As of December	
$ in millions	**2018**	2017
Consumer loans, gross	**$4,536**	$1,912
Refreshed FICO credit score		
Greater than or equal to 660	**88%**	89%
Less than 660	**12%**	11%
Total	**100%**	100%

For PCI loans, the firm's risk assessment process includes reviewing certain key metrics, such as delinquency status, collateral values, expected cash flows and other risk factors.

Impaired Loans. Loans receivable (excluding PCI loans) are determined to be impaired when it is probable that the firm will not collect all principal and interest due under the contractual terms. At that time, loans are generally placed on nonaccrual status and all accrued but uncollected interest is reversed against interest income and interest subsequently collected is recognized on a cash basis to the extent the loan balance is deemed collectible. Otherwise, all cash received is used to reduce the outstanding loan balance. A loan is considered past due when a principal or interest payment has not been made according to its contractual terms.

In certain circumstances, the firm may also modify the original terms of a loan agreement by granting a concession to a borrower experiencing financial difficulty. Such modifications are considered troubled debt restructurings and typically include interest rate reductions, payment extensions, and modification of loan covenants. Loans modified in a troubled debt restructuring are considered impaired and are subject to specific loan-level reserves.

The gross carrying value of impaired loans receivable (excluding PCI loans) on nonaccrual status was $838 million as of December 2018 and $845 million as of December 2017. Such loans included $27 million as of December 2018 and $61 million as of December 2017 of corporate loans that were modified in a troubled debt restructuring. The firm did not have any lending commitments related to these loans as of both December 2018 and December 2017. The amount of loans 30 days or more past due was $208 million as of December 2018 and $567 million as of December 2017.

When it is determined that the firm cannot reasonably estimate expected cash flows on PCI loans or pools of loans, such loans are placed on nonaccrual status.

Allowance for Credit Losses

The firm's allowance for credit losses consists of the allowance for losses on loans and lending commitments.

The firm's allowance for loan losses consists of specific loan-level reserves, portfolio level reserves and reserves on PCI loans, as described below:

- Specific loan-level reserves are determined on loans (excluding PCI loans) that exhibit credit quality weakness and are therefore individually evaluated for impairment.
- Portfolio level reserves are determined on loans (excluding PCI loans) not evaluated for specific loan-level reserves by aggregating groups of loans with similar risk characteristics and estimating the probable loss inherent in the portfolio.
- Reserves on PCI loans are recorded when it is determined that the expected cash flows, which are reassessed on a quarterly basis, will be lower than those used to establish the current effective yield for such loans or pools of loans. If the expected cash flows are determined to be significantly higher than those used to establish the current effective yield, such increases are initially recognized as a reduction to any previously recorded allowances for loan losses and any remaining increases are recognized as interest income prospectively over the life of the loan or pools of loans as an increase to the effective yield.

The allowance for loan losses is determined using various risk factors, including industry default and loss data, current macroeconomic indicators, borrower's capacity to meet its financial obligations, borrower's country of risk, loan seniority and collateral type. In addition, for loans backed by real estate, risk factors include loan to value ratio, debt service ratio and home price index. Risk factors for consumer loans include FICO credit scores and delinquency status.

Management's estimate of loan losses entails judgment about loan collectability at the reporting dates, and there are uncertainties inherent in those judgments. While management uses the best information available to determine this estimate, future adjustments to the allowance may be necessary based on, among other things, changes in the economic environment or variances between actual results and the original assumptions used. Loans are charged off against the allowance for loan losses when deemed to be uncollectible.

The firm also records an allowance for losses on lending commitments that are held for investment and accounted for on an accrual basis. Such allowance is determined using the same methodology as the allowance for loan losses, while also taking into consideration the probability of drawdowns or funding, and is included in other liabilities.

The table below presents gross loans receivable and lending commitments by impairment methodology.

$ in millions	Specific	Portfolio	PCI	Total
As of December 2018				
Loans Receivable				
Corporate loans	**$358**	**$ 36,925**	**$ –**	**$ 37,283**
PWM loans	**46**	**17,173**	**–**	**17,219**
Commercial real estate loans	**9**	**10,851**	**581**	**11,441**
Residential real estate loans	**425**	**4,402**	**2,457**	**7,284**
Consumer loans	**–**	**4,536**	**–**	**4,536**
Other loans	**–**	**3,889**	**4**	**3,893**
Total	**$838**	**$ 77,776**	**$3,042**	**$ 81,656**
Lending Commitments				
Corporate	**$ 31**	**$113,453**	**$ –**	**$113,484**
Other	**–**	**7,513**	**–**	**7,513**
Total	**$ 31**	**$120,966**	**$ –**	**$120,997**
As of December 2017				
Loans Receivable				
Corporate loans	$377	$ 30,372	$ –	$ 30,749
PWM loans	163	16,428	–	16,591
Commercial real estate loans	–	6,871	1,116	7,987
Residential real estate loans	231	2,676	3,327	6,234
Consumer loans	–	1,912	–	1,912
Other loans	74	3,179	10	3,263
Total	$845	$ 61,438	$4,453	$ 66,736
Lending Commitments				
Corporate	$ 53	$118,500	$ –	$118,553
Other	–	5,951	–	5,951
Total	$ 53	$124,451	$ –	$124,504

In the table above:

- Gross loans receivable and lending commitments, subject to specific loan-level reserves, included $484 million as of December 2018 and $492 million as of December 2017 of impaired loans and lending commitments, which did not require a reserve as the loan was deemed to be recoverable.
- Gross loans receivable deemed impaired and subject to specific loan-level reserves as a percentage of total gross loans receivable was 1.0% as of December 2018 and 1.3% as of December 2017.

The table below presents information about the allowance for credit losses.

	Year Ended December 2018		Year Ended December 2017	
$ in millions	**Loans Receivable**	**Lending Commitments**	Loans Receivable	Lending Commitments
Changes in the allowance for credit losses				
Beginning balance	**$ 803**	**$274**	$ 509	$212
Net charge-offs	**(337)**	**–**	(203)	–
Provision	**654**	**20**	574	83
Other	**(54)**	**(8)**	(77)	(21)
Ending balance	**$1,066**	**$286**	$ 803	$274
Allowance for losses by impairment methodology				
Specific	**$ 102**	**$ 3**	$ 119	$ 14
Portfolio	**848**	**283**	518	260
PCI	**116**	**–**	166	–
Total	**$1,066**	**$286**	$ 803	$274

In the table above:

- Net charge-offs were primarily related to consumer loans and commercial real estate PCI loans for 2018 and primarily related to corporate loans for 2017.
- The provision for credit losses was primarily related to consumer loans and corporate loans for 2018 and primarily related to corporate loans and lending commitments, and commercial real estate loans for 2017.
- Other represents the reduction to the allowance related to loans and lending commitments transferred to held for sale.
- Portfolio level reserves were primarily related to corporate loans and lending commitments, specific loan-level reserves were substantially all related to corporate loans and reserves on PCI loans were related to real estate loans.
- Substantially all of the allowance for losses on lending commitments was related to corporate lending commitments.
- Allowance for loan losses as a percentage of total gross loans receivable was 1.3% as of December 2018 and 1.2% as of December 2017.
- Net charge-offs as a percentage of average total gross loans receivable were 0.5% for 2018 and 0.4% for 2017.

Note 10.

Collateralized Agreements and Financings

Collateralized agreements are resale agreements and securities borrowed. Collateralized financings are repurchase agreements, securities loaned and other secured financings. The firm enters into these transactions in order to, among other things, facilitate client activities, invest excess cash, acquire securities to cover short positions and finance certain firm activities.

Collateralized agreements and financings are presented on a net-by-counterparty basis when a legal right of setoff exists. Interest on collateralized agreements, which is included in interest income, and collateralized financings, which is included in interest expense, is recognized over the life of the transaction. See Note 23 for further information about interest income and interest expense.

The table below presents the carrying value of resale and repurchase agreements and securities borrowed and loaned transactions.

	As of December	
$ in millions	**2018**	2017
Resale agreements	**$139,258**	$120,822
Securities borrowed	**$135,285**	$190,848
Repurchase agreements	**$ 78,723**	$ 84,718
Securities loaned	**$ 11,808**	$ 14,793

In the table above:

- Substantially all resale agreements and all repurchase agreements are carried at fair value under the fair value option. See Note 8 for further information about the valuation techniques and significant inputs used to determine fair value.
- Securities borrowed of $23.14 billion as of December 2018 and $78.19 billion as of December 2017, and securities loaned of $3.24 billion as of December 2018 and $5.36 billion as of December 2017 were at fair value.

Resale and Repurchase Agreements

A resale agreement is a transaction in which the firm purchases financial instruments from a seller, typically in exchange for cash, and simultaneously enters into an agreement to resell the same or substantially the same financial instruments to the seller at a stated price plus accrued interest at a future date.

A repurchase agreement is a transaction in which the firm sells financial instruments to a buyer, typically in exchange for cash, and simultaneously enters into an agreement to repurchase the same or substantially the same financial instruments from the buyer at a stated price plus accrued interest at a future date.

Even though repurchase and resale agreements (including "repos- and reverses-to-maturity") involve the legal transfer of ownership of financial instruments, they are accounted for as financing arrangements because they require the financial instruments to be repurchased or resold before or at the maturity of the agreement. The financial instruments purchased or sold in resale and repurchase agreements typically include U.S. government and agency, and investment-grade sovereign obligations.

The firm receives financial instruments purchased under resale agreements and makes delivery of financial instruments sold under repurchase agreements. To mitigate credit exposure, the firm monitors the market value of these financial instruments on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the financial instruments, as appropriate. For resale agreements, the firm typically requires collateral with a fair value approximately equal to the carrying value of the relevant assets in the consolidated statements of financial condition.

Securities Borrowed and Loaned Transactions

In a securities borrowed transaction, the firm borrows securities from a counterparty in exchange for cash or securities. When the firm returns the securities, the counterparty returns the cash or securities. Interest is generally paid periodically over the life of the transaction.

In a securities loaned transaction, the firm lends securities to a counterparty in exchange for cash or securities. When the counterparty returns the securities, the firm returns the cash or securities posted as collateral. Interest is generally paid periodically over the life of the transaction.

The firm receives securities borrowed and makes delivery of securities loaned. To mitigate credit exposure, the firm monitors the market value of these securities on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the securities, as appropriate. For securities borrowed transactions, the firm typically requires collateral with a fair value approximately equal to the carrying value of the securities borrowed transaction.

Securities borrowed and loaned within FICC Client Execution are recorded at fair value under the fair value option. See Note 8 for further information about securities borrowed and loaned accounted for at fair value.

Securities borrowed and loaned within Securities Services are recorded based on the amount of cash collateral advanced or received plus accrued interest. As these agreements generally can be terminated on demand, they exhibit little, if any, sensitivity to changes in interest rates. Therefore, the carrying value of such agreements approximates fair value. As these agreements are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these agreements been included in the firm's fair value hierarchy, they would have been classified in level 2 as of both December 2018 and December 2017.

Offsetting Arrangements

The table below presents the gross and net resale and repurchase agreements and securities borrowed and loaned transactions, and the related amount of counterparty netting included in the consolidated statements of financial condition, as well as the amounts of counterparty netting and cash and securities collateral not offset in the consolidated statements of financial condition.

	Assets		Liabilities	
$ in millions	Resale agreements	Securities borrowed	Repurchase agreements	Securities loaned
As of December 2018				
Included in consolidated statements of financial condition				
Gross carrying value	**$ 246,284**	**$ 139,556**	**$ 185,749**	**$ 16,079**
Counterparty netting	**(107,026)**	**(4,271)**	**(107,026)**	**(4,271)**
Total	**139,258**	**135,285**	**78,723**	**11,808**
Amounts not offset				
Counterparty netting	**(5,870)**	**(1,104)**	**(5,870)**	**(1,104)**
Collateral	**(130,707)**	**(127,340)**	**(70,691)**	**(10,491)**
Total	**$ 2,681**	**$ 6,841**	**$ 2,162**	**$ 213**
As of December 2017				
Included in consolidated statements of financial condition				
Gross carrying value	$ 209,972	$ 195,783	$ 173,868	$ 19,728
Counterparty netting	(89,150)	(4,935)	(89,150)	(4,935)
Total	120,822	190,848	84,718	14,793
Amounts not offset				
Counterparty netting	(5,441)	(4,412)	(5,441)	(4,412)
Collateral	(113,305)	(177,679)	(76,793)	(9,731)
Total	$ 2,076	$ 8,757	$ 2,484	$ 650

In the table above:

- Substantially all of the gross carrying values of these arrangements are subject to enforceable netting agreements.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Amounts not offset includes counterparty netting that does not meet the criteria for netting under U.S. GAAP and the fair value of collateral received or posted subject to enforceable credit support agreements.

Gross Carrying Value of Repurchase Agreements and Securities Loaned

The table below presents the gross carrying value of repurchase agreements and securities loaned by class of collateral pledged.

$ in millions	Repurchase agreements	Securities loaned
As of December 2018		
Money market instruments	**$ 100**	**$ –**
U.S. government and agency obligations	**88,060**	**–**
Non-U.S. government and agency obligations	**84,443**	**2,438**
Securities backed by commercial real estate	**3**	**–**
Securities backed by residential real estate	**221**	**–**
Corporate debt securities	**5,495**	**195**
State and municipal obligations	**25**	**–**
Equity securities	**7,402**	**13,446**
Total	**$185,749**	**$16,079**
As of December 2017		
Money market instruments	$ 97	$ –
U.S. government and agency obligations	80,591	–
Non-U.S. government and agency obligations	73,031	2,245
Securities backed by commercial real estate	43	–
Securities backed by residential real estate	338	–
Corporate debt securities	7,140	1,145
Other debt obligations	55	–
Equity securities	12,573	16,338
Total	$173,868	$19,728

The table below presents the gross carrying value of repurchase agreements and securities loaned by maturity date.

	As of December 2018	
$ in millions	**Repurchase agreements**	**Securities loaned**
No stated maturity and overnight	**$ 65,764**	**$ 8,300**
2 - 30 days	**82,482**	**4,273**
31 - 90 days	**14,636**	**774**
91 days - 1 year	**17,137**	**2,503**
Greater than 1 year	**5,730**	**229**
Total	**$185,749**	**$16,079**

In the table above:

- Repurchase agreements and securities loaned that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Repurchase agreements and securities loaned that are redeemable prior to maturity at the option of the holder are reflected at the earliest dates such options become exercisable.

Other Secured Financings

In addition to repurchase agreements and securities loaned transactions, the firm funds certain assets through the use of other secured financings and pledges financial instruments and other assets as collateral in these transactions. These other secured financings consist of:

- Liabilities of consolidated VIEs;
- Transfers of assets accounted for as financings rather than sales (e.g., collateralized central bank financings, pledged commodities, bank loans and mortgage whole loans); and
- Other structured financing arrangements.

Other secured financings includes nonrecourse arrangements. Nonrecourse other secured financings were $8.47 billion as of December 2018 and $5.31 billion as of December 2017.

The firm has elected to apply the fair value option to substantially all other secured financings because the use of fair value eliminates non-economic volatility in earnings that would arise from using different measurement attributes. See Note 8 for further information about other secured financings that are accounted for at fair value.

Other secured financings that are not recorded at fair value are recorded based on the amount of cash received plus accrued interest, which generally approximates fair value. As these financings are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these financings been included in the firm's fair value hierarchy, they would have been primarily classified in level 2 as of both December 2018 and December 2017.

The table below presents information about other secured financings.

$ in millions	U.S. Dollar	Non-U.S. Dollar	Total
As of December 2018			
Other secured financings (short-term):			
At fair value	**$ 3,528**	**$ 6,027**	**$ 9,555**
At amortized cost	**–**	**–**	**–**
Other secured financings (long-term):			
At fair value	**9,010**	**2,339**	**11,349**
At amortized cost	**529**	**–**	**529**
Total other secured financings	**$13,067**	**$ 8,366**	**$21,433**
Other secured financings collateralized by:			
Financial instruments	**$ 8,960**	**$ 7,550**	**$16,510**
Other assets	**$ 4,107**	**$ 816**	**$ 4,923**
As of December 2017			
Other secured financings (short-term):			
At fair value	$ 7,704	$ 6,856	$14,560
At amortized cost	–	336	336
Other secured financings (long-term):			
At fair value	6,779	3,006	9,785
At amortized cost	107	–	107
Total other secured financings	$14,590	$10,198	$24,788
Other secured financings collateralized by:			
Financial instruments	$12,454	$ 9,870	$22,324
Other assets	$ 2,136	$ 328	$ 2,464

In the table above:

- Short-term other secured financings includes financings maturing within one year of the financial statement date and financings that are redeemable within one year of the financial statement date at the option of the holder.
- U.S. dollar-denominated long-term other secured financings at amortized cost had a weighted average interest rate of 4.02% as of December 2018 and 3.89% as of December 2017. These rates include the effect of hedging activities.
- Non-U.S. dollar-denominated short-term other secured financings at amortized cost had a weighted average interest rate of 2.61% as of December 2017. This rate includes the effect of hedging activities.
- Total other secured financings included $2.40 billion as of December 2018 and $1.55 billion as of December 2017 related to transfers of financial assets accounted for as financings rather than sales. Such financings were collateralized by financial assets of $2.41 billion as of December 2018 and $1.57 billion as of December 2017, both primarily included in financial instruments owned.
- Other secured financings collateralized by financial instruments included $12.41 billion as of December 2018 and $16.61 billion as of December 2017 of other secured financings collateralized by financial instruments owned, and included $4.10 billion as of December 2018 and $5.71 billion as of December 2017 of other secured financings collateralized by financial instruments received as collateral and repledged.

The table below presents other secured financings by maturity.

$ in millions	**As of December 2018**
Other secured financings (short-term)	**$ 9,555**
Other secured financings (long-term):	
2020	**4,435**
2021	**1,276**
2022	**2,387**
2023	**776**
2024 - thereafter	**3,004**
Total other secured financings (long-term)	**11,878**
Total other secured financings	**$21,433**

In the table above:

- Long-term other secured financings that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Long-term other secured financings that are redeemable prior to maturity at the option of the holder are reflected at the earliest dates such options become exercisable.

Collateral Received and Pledged

The firm receives cash and securities (e.g., U.S. government and agency obligations, other sovereign and corporate obligations, as well as equity securities) as collateral, primarily in connection with resale agreements, securities borrowed, derivative transactions and customer margin loans. The firm obtains cash and securities as collateral on an upfront or contingent basis for derivative instruments and collateralized agreements to reduce its credit exposure to individual counterparties.

In many cases, the firm is permitted to deliver or repledge financial instruments received as collateral when entering into repurchase agreements and securities loaned transactions, primarily in connection with secured client financing activities. The firm is also permitted to deliver or repledge these financial instruments in connection with other secured financings, collateralized derivative transactions and firm or customer settlement requirements.

The firm also pledges certain financial instruments owned in connection with repurchase agreements, securities loaned transactions and other secured financings, and other assets (substantially all real estate and cash) in connection with other secured financings to counterparties who may or may not have the right to deliver or repledge them.

The table below presents financial instruments at fair value received as collateral that were available to be delivered or repledged and were delivered or repledged.

	As of December	
$ in millions	**2018**	2017
Collateral available to be delivered or repledged	**$681,516**	$763,984
Collateral that was delivered or repledged	**$565,625**	$599,565

In the table above, collateral available to be delivered or repledged excludes $14.10 billion as of December 2018 and $1.52 billion as of December 2017 of securities received under resale agreements and securities borrowed transactions that contractually had the right to be delivered or repledged, but were segregated for regulatory and other purposes.

The table below presents information about assets pledged.

	As of December	
$ in millions	**2018**	2017
Financial instruments owned pledged to counterparties that:		
Had the right to deliver or repledge	**$ 55,081**	$ 50,335
Did not have the right to deliver or repledge	**$ 73,540**	$ 78,656
Other assets pledged to counterparties that did not have the right to deliver or repledge	**$ 8,037**	$ 4,838

The firm also segregated securities included in financial instruments owned of $23.03 billion as of December 2018 and $10.42 billion as of December 2017 for regulatory and other purposes. See Note 3 for information about segregated cash.

Note 11.

Securitization Activities

The firm securitizes residential and commercial mortgages, corporate bonds, loans and other types of financial assets by selling these assets to securitization vehicles (e.g., trusts, corporate entities and limited liability companies) or through a resecuritization. The firm acts as underwriter of the beneficial interests that are sold to investors. The firm's residential mortgage securitizations are primarily in connection with government agency securitizations.

Beneficial interests issued by securitization entities are debt or equity instruments that give the investors rights to receive all or portions of specified cash inflows to a securitization vehicle and include senior and subordinated interests in principal, interest and/or other cash inflows. The proceeds from the sale of beneficial interests are used to pay the transferor for the financial assets sold to the securitization vehicle or to purchase securities which serve as collateral.

The firm accounts for a securitization as a sale when it has relinquished control over the transferred financial assets. Prior to securitization, the firm generally accounts for assets pending transfer at fair value and therefore does not typically recognize significant gains or losses upon the transfer of assets. Net revenues from underwriting activities are recognized in connection with the sales of the underlying beneficial interests to investors.

For transfers of financial assets that are not accounted for as sales, the assets remain in financial instruments owned and the transfer is accounted for as a collateralized financing, with the related interest expense recognized over the life of the transaction. See Note 10 for further information about collateralized financings and Note 23 for further information about interest expense.

The firm generally receives cash in exchange for the transferred assets but may also have continuing involvement with the transferred financial assets, including ownership of beneficial interests in securitized financial assets, primarily in the form of debt instruments. The firm may also purchase senior or subordinated securities issued by securitization vehicles (which are typically VIEs) in connection with secondary market-making activities.

The primary risks included in beneficial interests and other interests from the firm's continuing involvement with securitization vehicles are the performance of the underlying collateral, the position of the firm's investment in the capital structure of the securitization vehicle and the market yield for the security. These interests primarily are accounted for at fair value and classified in level 2 of the fair value hierarchy. Beneficial interests and other interests not accounted for at fair value are carried at amounts that approximate fair value. See Notes 5 through 8 for further information about fair value measurements.

The table below presents the amount of financial assets securitized and the cash flows received on retained interests in securitization entities in which the firm had continuing involvement as of the end of the period.

	Year Ended December		
$ in millions	**2018**	2017	2016
Residential mortgages	**$21,229**	$18,142	$12,164
Commercial mortgages	**8,745**	7,872	233
Other financial assets	**1,914**	481	181
Total financial assets securitized	**$31,888**	$26,495	$12,578
Retained interests cash flows	**$ 296**	$ 264	$ 189

The table below presents information about nonconsolidated securitization entities to which the firm sold assets and has continuing involvement.

$ in millions	Outstanding Principal Amount	Retained Interests	Purchased Interests
As of December 2018			
U.S. government agency-issued collateralized mortgage obligations	**$24,506**	**$1,758**	**$29**
Other residential mortgage-backed	**19,560**	**941**	**15**
Other commercial mortgage-backed	**15,088**	**448**	**10**
Corporate debt and other asset-backed	**3,311**	**133**	**3**
Total	**$62,465**	**$3,280**	**$57**
As of December 2017			
U.S. government agency-issued collateralized mortgage obligations	$20,232	$1,120	$16
Other residential mortgage-backed	10,558	711	17
Other commercial mortgage-backed	7,916	228	7
Corporate debt and other asset-backed	2,108	56	1
Total	$40,814	$2,115	$41

In the table above:

- The outstanding principal amount is presented for the purpose of providing information about the size of the securitization entities and is not representative of the firm's risk of loss.
- The firm's risk of loss from retained or purchased interests is limited to the carrying value of these interests.

- Purchased interests represent senior and subordinated interests, purchased in connection with secondary market-making activities, in securitization entities in which the firm also holds retained interests.
- Substantially all of the total outstanding principal amount and total retained interests relate to securitizations during 2014 and thereafter as of December 2018, and relate to securitizations during 2012 and thereafter as of December 2017.
- The fair value of retained interests was $3.28 billion as of December 2018 and $2.13 billion as of December 2017.

In addition to the interests in the table above, the firm had other continuing involvement in the form of derivative transactions and commitments with certain nonconsolidated VIEs. The carrying value of these derivatives and commitments was a net asset of $75 million as of December 2018 and $86 million as of December 2017, and the notional amount of these derivatives and commitments was $1.09 billion as of December 2018 and $1.26 billion as of December 2017. The notional amounts of these derivatives and commitments are included in maximum exposure to loss in the nonconsolidated VIE table in Note 12.

The table below presents information about the weighted average key economic assumptions used in measuring the fair value of mortgage-backed retained interests.

	As of December	
$ in millions	**2018**	2017
Fair value of retained interests	**$ 3,151**	$2,071
Weighted average life (years)	**7.2**	6.0
Constant prepayment rate	**11.9%**	9.4%
Impact of 10% adverse change	**$ (27)**	$ (19)
Impact of 20% adverse change	**$ (53)**	$ (35)
Discount rate	**4.7%**	4.2%
Impact of 10% adverse change	**$ (75)**	$ (35)
Impact of 20% adverse change	**$ (147)**	$ (70)

In the table above:

- Amounts do not reflect the benefit of other financial instruments that are held to mitigate risks inherent in these retained interests.
- Changes in fair value based on an adverse variation in assumptions generally cannot be extrapolated because the relationship of the change in assumptions to the change in fair value is not usually linear.
- The impact of a change in a particular assumption is calculated independently of changes in any other assumption. In practice, simultaneous changes in assumptions might magnify or counteract the sensitivities disclosed above.
- The constant prepayment rate is included only for positions for which it is a key assumption in the determination of fair value.
- The discount rate for retained interests that relate to U.S. government agency-issued collateralized mortgage obligations does not include any credit loss. Expected credit loss assumptions are reflected in the discount rate for the remainder of retained interests.

The firm has other retained interests not reflected in the table above with a fair value of $133 million and a weighted average life of 4.2 years as of December 2018, and a fair value of $56 million and a weighted average life of 4.5 years as of December 2017. Due to the nature and fair value of certain of these retained interests, the weighted average assumptions for constant prepayment and discount rates and the related sensitivity to adverse changes are not meaningful as of both December 2018 and December 2017. The firm's maximum exposure to adverse changes in the value of these interests is the carrying value of $133 million as of December 2018 and $56 million as of December 2017.

Note 12.

Variable Interest Entities

A variable interest in a VIE is an investment (e.g., debt or equity) or other interest (e.g., derivatives or loans and lending commitments) that will absorb portions of the VIE's expected losses and/or receive portions of the VIE's expected residual returns.

The firm's variable interests in VIEs include senior and subordinated debt; loans and lending commitments; limited and general partnership interests; preferred and common equity; derivatives that may include foreign currency, equity and/or credit risk; guarantees; and certain of the fees the firm receives from investment funds. Certain interest rate, foreign currency and credit derivatives the firm enters into with VIEs are not variable interests because they create, rather than absorb, risk.

VIEs generally finance the purchase of assets by issuing debt and equity securities that are either collateralized by or indexed to the assets held by the VIE. The debt and equity securities issued by a VIE may include tranches of varying levels of subordination. The firm's involvement with VIEs includes securitization of financial assets, as described in Note 11, and investments in and loans to other types of VIEs, as described below. See Note 11 for further information about securitization activities, including the definition of beneficial interests. See Note 3 for the firm's consolidation policies, including the definition of a VIE.

VIE Consolidation Analysis

The enterprise with a controlling financial interest in a VIE is known as the primary beneficiary and consolidates the VIE. The firm determines whether it is the primary beneficiary of a VIE by performing an analysis that principally considers:

- Which variable interest holder has the power to direct the activities of the VIE that most significantly impact the VIE's economic performance;
- Which variable interest holder has the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE;
- The VIE's purpose and design, including the risks the VIE was designed to create and pass through to its variable interest holders;
- The VIE's capital structure;
- The terms between the VIE and its variable interest holders and other parties involved with the VIE; and
- Related-party relationships.

The firm reassesses its evaluation of whether an entity is a VIE when certain reconsideration events occur. The firm reassesses its determination of whether it is the primary beneficiary of a VIE on an ongoing basis based on current facts and circumstances.

VIE Activities

The firm is principally involved with VIEs through the following business activities:

Mortgage-Backed VIEs. The firm sells residential and commercial mortgage loans and securities to mortgage-backed VIEs and may retain beneficial interests in the assets sold to these VIEs. The firm purchases and sells beneficial interests issued by mortgage-backed VIEs in connection with market-making activities. In addition, the firm may enter into derivatives with certain of these VIEs, primarily interest rate swaps, which are typically not variable interests. The firm generally enters into derivatives with other counterparties to mitigate its risk.

Real Estate, Credit- and Power-Related and Other Investing VIEs. The firm purchases equity and debt securities issued by and makes loans to VIEs that hold real estate, performing and nonperforming debt, distressed loans, power-related assets and equity securities. The firm generally does not sell assets to, or enter into derivatives with, these VIEs.

Corporate Debt and Other Asset-Backed VIEs. The firm structures VIEs that issue notes to clients, purchases and sells beneficial interests issued by corporate debt and other asset-backed VIEs in connection with market-making activities, and makes loans to VIEs that warehouse corporate debt. Certain of these VIEs synthetically create the exposure for the beneficial interests they issue by entering into credit derivatives with the firm, rather than purchasing the underlying assets. In addition, the firm may enter into derivatives, such as total return swaps, with certain corporate debt and other asset-backed VIEs, under which the firm pays the VIE a return due to the beneficial interest holders and receives the return on the collateral owned by the VIE. The collateral owned by these VIEs is primarily other asset-backed loans and securities. The firm generally can be removed as the total return swap counterparty and enters into derivatives with other counterparties to mitigate its risk related to these swaps. The firm may sell assets to the corporate debt and other asset-backed VIEs it structures.

Principal-Protected Note VIEs. The firm structures VIEs that issue principal-protected notes to clients. These VIEs own portfolios of assets, principally with exposure to hedge funds. Substantially all of the principal protection on the notes issued by these VIEs is provided by the asset portfolio rebalancing that is required under the terms of the notes. The firm enters into total return swaps with these VIEs under which the firm pays the VIE the return due to the principal-protected note holders and receives the return on the assets owned by the VIE. The firm may enter into derivatives with other counterparties to mitigate its risk. The firm also obtains funding through these VIEs.

Investments in Funds. The firm makes equity investments in certain investment fund VIEs it manages and is entitled to receive fees from these VIEs. The firm generally does not sell assets to, or enter into derivatives with, these VIEs.

Nonconsolidated VIEs

The table below presents a summary of the nonconsolidated VIEs in which the firm holds variable interests.

	As of December	
$ in millions	**2018**	2017
Total nonconsolidated VIEs		
Assets in VIEs	**$118,186**	$97,962
Carrying value of variable interests — assets	**9,543**	8,425
Carrying value of variable interests — liabilities	**478**	214
Maximum exposure to loss:		
Retained interests	**3,280**	2,115
Purchased interests	**983**	1,172
Commitments and guarantees	**2,745**	3,462
Derivatives	**8,975**	8,644
Loans and investments	**4,728**	4,216
Total maximum exposure to loss	**$ 20,711**	$19,609

In the table above:

- The nature of the firm's variable interests can take different forms, as described in the rows under maximum exposure to loss.
- The firm's exposure to the obligations of VIEs is generally limited to its interests in these entities. In certain instances, the firm provides guarantees, including derivative guarantees, to VIEs or holders of variable interests in VIEs.
- The maximum exposure to loss excludes the benefit of offsetting financial instruments that are held to mitigate the risks associated with these variable interests.
- The maximum exposure to loss from retained interests, purchased interests, and loans and investments is the carrying value of these interests.
- The maximum exposure to loss from commitments and guarantees, and derivatives is the notional amount, which does not represent anticipated losses and has not been reduced by unrealized losses. As a result, the maximum exposure to loss exceeds liabilities recorded for commitments and guarantees, and derivatives.

The table below disaggregates, by principal business activity, the information for nonconsolidated VIEs included in the summary table above.

	As of December	
$ in millions	**2018**	2017
Mortgage-backed		
Assets in VIEs	**$73,262**	$55,153
Carrying value of variable interests — assets	**4,090**	3,128
Maximum exposure to loss:		
Retained interests	**3,147**	2,059
Purchased interests	**941**	1,067
Commitments and guarantees	**35**	11
Derivatives	**77**	99
Total maximum exposure to loss	**$ 4,200**	$ 3,236
Real estate, credit- and power-related and other investing		
Assets in VIEs	**$18,851**	$15,539
Carrying value of variable interests — assets	**3,601**	3,289
Carrying value of variable interests — liabilities	**20**	2
Maximum exposure to loss:		
Commitments and guarantees	**1,543**	1,617
Derivatives	**113**	238
Loans and investments	**3,572**	3,051
Total maximum exposure to loss	**$ 5,228**	$ 4,906
Corporate debt and other asset-backed		
Assets in VIEs	**$15,842**	$16,251
Carrying value of variable interests — assets	**1,563**	1,660
Carrying value of variable interests — liabilities	**458**	212
Maximum exposure to loss:		
Retained interests	**133**	56
Purchased interests	**42**	105
Commitments and guarantees	**1,113**	1,779
Derivatives	**8,782**	8,303
Loans and investments	**867**	817
Total maximum exposure to loss	**$10,937**	$11,060
Investments in funds		
Assets in VIEs	**$10,231**	$11,019
Carrying value of variable interests — assets	**289**	348
Maximum exposure to loss:		
Commitments and guarantees	**54**	55
Derivatives	**3**	4
Loans and investments	**289**	348
Total maximum exposure to loss	**$ 346**	$ 407

As of both December 2018 and December 2017, the carrying values of the firm's variable interests in nonconsolidated VIEs are included in the consolidated statements of financial condition as follows:

- Mortgage-backed: Assets were primarily included in financial instruments owned.
- Real estate, credit- and power-related and other investing: Assets were primarily included in financial instruments owned and liabilities were included in financial instruments sold, but not yet purchased and other liabilities.
- Corporate debt and other asset-backed: Assets were primarily included in loans receivable and liabilities were included in financial instruments sold, but not yet purchased.
- Investments in funds: Assets were included in financial instruments owned.

Consolidated VIEs

The table below presents a summary of the carrying value and classification of assets and liabilities in consolidated VIEs.

	As of December	
$ in millions	**2018**	2017
Total consolidated VIEs		
Assets		
Cash and cash equivalents	**$ 84**	$ 275
Customer and other receivables	**2**	2
Loans receivable	**319**	427
Financial instruments owned	**2,034**	1,194
Other assets	**1,261**	1,273
Total	**$3,700**	$3,171
Liabilities		
Other secured financings	**$1,204**	$1,023
Financial instruments sold, but not yet purchased	**20**	15
Unsecured short-term borrowings	**45**	79
Unsecured long-term borrowings	**207**	225
Other liabilities	**1,100**	577
Total	**$2,576**	$1,919

In the table above:

- Assets and liabilities are presented net of intercompany eliminations and exclude the benefit of offsetting financial instruments that are held to mitigate the risks associated with the firm's variable interests.
- VIEs in which the firm holds a majority voting interest are excluded if (i) the VIE meets the definition of a business and (ii) the VIE's assets can be used for purposes other than the settlement of its obligations.
- Substantially all assets can only be used to settle obligations of the VIE.

The table below disaggregates, by principal business activity, the information for consolidated VIEs included in the summary table above.

	As of December	
$ in millions	**2018**	2017
Real estate, credit-related and other investing		
Assets		
Cash and cash equivalents	**$ 84**	$ 275
Loans receivable	**269**	375
Financial instruments owned	**1,815**	896
Other assets	**1,258**	1,267
Total	**$ 3,426**	$ 2,813
Liabilities		
Other secured financings	**$ 596**	$ 327
Financial instruments sold, but not yet purchased	**20**	15
Other liabilities	**1,100**	577
Total	**$ 1,716**	$ 919
Mortgage-backed and other asset-backed		
Assets		
Customer and other receivables	**$ 2**	$ 2
Loans receivable	**50**	52
Financial instruments owned	**210**	242
Other assets	**3**	6
Total	**$ 265**	$ 302
Liabilities		
Other secured financings	**$ 140**	$ 207
Total	**$ 140**	$ 207
Principal-protected notes		
Assets		
Financial instruments owned	**$ 9**	$ 56
Total	**$ 9**	$ 56
Liabilities		
Other secured financings	**$ 468**	$ 489
Unsecured short-term borrowings	**45**	79
Unsecured long-term borrowings	**207**	225
Total	**$ 720**	$ 793

In the table above:

- The majority of the assets in principal-protected notes VIEs are intercompany and are eliminated in consolidation.
- Creditors and beneficial interest holders of real estate, credit-related and other investing VIEs, and mortgage-backed and other asset-backed VIEs do not have recourse to the general credit of the firm.

Note 13.

Other Assets

The table below presents other assets by type.

	As of December	
$ in millions	**2018**	2017
Property, leasehold improvements and equipment	**$18,317**	$15,094
Goodwill and identifiable intangible assets	**4,082**	4,038
Income tax-related assets	**1,529**	3,728
Miscellaneous receivables and other	**6,712**	5,486
Total	**$30,640**	$28,346

In the table above:

- Property, leasehold improvements and equipment is net of accumulated depreciation and amortization of $9.08 billion as of December 2018 and $8.28 billion as of December 2017. Property, leasehold improvements and equipment included $5.57 billion as of December 2018 and $5.97 billion as of December 2017 that the firm uses in connection with its operations, and $896 million as of December 2018 and $982 million as of December 2017 of foreclosed real estate primarily related to PCI loans. The remainder is held by investment entities, including VIEs, consolidated by the firm. Substantially all property and equipment is depreciated on a straight-line basis over the useful life of the asset. Leasehold improvements are amortized on a straight-line basis over the shorter of the useful life of the improvement or the term of the lease. Capitalized costs of software developed or obtained for internal use are amortized on a straight-line basis over three years.
- The decrease in income tax-related assets from December 2017 to December 2018 reflected a decrease in net current tax receivables, as the net deferred tax liability related to the Tax Legislation repatriation tax became current and was netted against current tax receivables. See Note 24 for further information about Tax Legislation.
- Miscellaneous receivables and other included debt securities accounted for as held-to-maturity of $1.29 billion as of December 2018 and $800 million as of December 2017. As of December 2018, these securities were primarily backed by residential real estate and had maturities of greater than ten years. As of December 2017 these securities were backed by residential real estate and had maturities of greater than ten years. Held-to-maturity securities are carried at amortized cost and the carrying value of these securities approximated fair value as of both December 2018 and December 2017. As these securities are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these securities been included in the firm's fair value hierarchy, they would have been primarily classified in level 2 as of December 2018 and substantially all would have been classified in level 2 as of December 2017.
- Miscellaneous receivables and other included investments in qualified affordable housing projects of $653 million as of December 2018 and $679 million as of December 2017.

- Miscellaneous receivables and other included assets classified as held for sale of $1.01 billion as of December 2018 related to the firm's new European headquarters in London. During the third quarter of 2018, the firm entered into a sale and leaseback agreement, which closed in January 2019, to sell this property for $1.53 billion. The assets were classified as held for sale during the fourth quarter of 2018 when the construction of the property was substantially completed. Substantially all of the sale proceeds in excess of the carrying value of the property will be recognized over the life of the lease as a reduction to occupancy expense. In accordance with ASU No. 2016-02, the firm recorded a right-of-use asset upon the closing of the sale and lease back agreement in January 2019. See Note 3 for information about ASU No. 2016-02.
- Miscellaneous receivables and other included other assets classified as held for sale of $365 million as of December 2018 and $634 million as of December 2017 related to the firm's consolidated investments within its Investing & Lending segment, substantially all of which consisted of property and equipment.
- Miscellaneous receivables and other included equity-method investments of $357 million as of December 2018 and $275 million as of December 2017.

Goodwill and Identifiable Intangible Assets

Goodwill. The table below presents the carrying value of goodwill.

	As of December	
$ in millions	**2018**	2017
Investment Banking:		
Financial Advisory	**$ 98**	$ 98
Underwriting	**183**	183
Institutional Client Services:		
FICC Client Execution	**269**	269
Equities client execution	**2,403**	2,403
Securities services	**105**	105
Investing & Lending	**91**	2
Investment Management	**609**	605
Total	**$3,758**	$3,665

Goodwill is the cost of acquired companies in excess of the fair value of net assets, including identifiable intangible assets, at the acquisition date.

Goodwill is assessed for impairment annually in the fourth quarter or more frequently if events occur or circumstances change that indicate an impairment may exist. When assessing goodwill for impairment, first, qualitative factors are assessed to determine whether it is more likely than not that the estimated fair value of a reporting unit is less than its estimated carrying value. If the results of the qualitative assessment are not conclusive, a quantitative goodwill test is performed.

The quantitative goodwill test compares the estimated fair value of each reporting unit with its estimated net book value (including goodwill and identifiable intangible assets). If the reporting unit's estimated fair value exceeds its estimated net book value, goodwill is not impaired. An impairment is recognized if the estimated fair value of a reporting unit is less than its estimated net book value. To estimate the fair value of each reporting unit, a relative value technique is used because the firm believes market participants would use this technique to value the firm's reporting units. The relative value technique applies observable price-to-earnings multiples or price-to-book multiples and projected return on equity of comparable competitors to reporting units' net earnings or net book value. The estimated net book value of each reporting unit reflects an allocation of total shareholders' equity and represents the estimated amount of total shareholders' equity required to support the activities of the reporting unit under currently applicable regulatory capital requirements.

In the fourth quarter of 2018, the firm assessed goodwill for impairment for each of its reporting units by performing a qualitative assessment. Multiple factors were assessed with respect to each of the firm's reporting units to determine whether it was more likely than not that the estimated fair value of any of these reporting units was less than its estimated carrying value. The qualitative assessment also considered changes since the prior quantitative tests.

The firm considered the following factors in the qualitative assessment performed in the fourth quarter when evaluating whether it was more likely than not that the fair value of a reporting unit was less than its carrying value:

- **Performance Indicators.** During 2018, the firm's net revenues, diluted earnings per common share, return on average common shareholders' equity (ROE) and book value per common share all increased compared with 2017. The firm's operating expenses increased, reflecting investments in growth and higher client activity. Despite the increase in expenses, the efficiency ratio (total operating expenses divided by total net revenues) and pre-tax margin for 2018 remained stable compared with 2017 and there were no significant negative changes to the firm's overall cost structure since the prior quantitative goodwill tests were performed.
- **Firm and Industry Events.** There were no events, entity-specific or otherwise, that would have had a significant negative impact on the valuation of the firm's reporting units.
- **Macroeconomic Indicators.** Since the prior quantitative goodwill tests, the firm's general operating environment improved amid stronger global economic growth.

- **Fair Value Indicators.** Since the prior quantitative goodwill tests, fair value indicators in the market improved as global equity prices generally increased and credit spreads generally tightened. For the firm and most publicly traded participants in its industry, stock prices increased since the prior tests. In addition, price-to-book multiples generally remained greater than 1.0x and price-to-earnings multiples, while generally lower, remained relatively solid.

As a result of the qualitative assessment, the firm determined that it was more likely than not that the estimated fair value of each of the reporting units exceeded its respective carrying value. Therefore, the firm determined that goodwill for each reporting unit was not impaired and that a quantitative goodwill test was not required.

Subsequent to the qualitative assessment, the firm's stock price declined towards the end of the year. Due to the short period of time of this decline and continued favorable outlook for the firm's performance, the firm determined that this was not a triggering event for further assessment.

Identifiable Intangible Assets. The table below presents identifiable intangible assets by segment and type.

	As of December	
$ in millions	**2018**	2017
By Segment		
Institutional Client Services:		
FICC Client Execution	**$ 10**	$ 37
Equities client execution	**37**	88
Investing & Lending	**178**	140
Investment Management	**99**	108
Total	**$ 324**	$ 373
By Type		
Customer lists		
Gross carrying value	**$ 1,117**	$ 1,091
Accumulated amortization	**(970)**	(903)
Net carrying value	**147**	188
Acquired leases and other		
Gross carrying value	**636**	584
Accumulated amortization	**(459)**	(399)
Net carrying value	**177**	185
Total gross carrying value	**1,753**	1,675
Total accumulated amortization	**(1,429)**	(1,302)
Total net carrying value	**$ 324**	$ 373

The firm acquired $137 million of intangible assets during 2018, primarily related to acquired leases, with a weighted average amortization period of four years. The firm acquired $113 million of intangible assets during 2017, primarily related to acquired leases, with a weighted average amortization period of five years.

Substantially all of the firm's identifiable intangible assets are considered to have finite useful lives and are amortized over their estimated useful lives generally using the straight-line method.

The tables below present information about amortization of identifiable intangible assets.

	Year Ended December		
$ in millions	**2018**	2017	2016
Amortization	**$152**	$150	$162

$ in millions	**As of December 2018**
Estimated future amortization	
2019	**$113**
2020	**$ 56**
2021	**$ 42**
2022	**$ 32**
2023	**$ 27**

Impairments

The firm tests property, leasehold improvements and equipment, identifiable intangible assets and other assets for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable. To the extent the carrying value of an asset exceeds the projected undiscounted cash flows expected to result from the use and eventual disposal of the asset or asset group, the firm determines the asset is impaired and records an impairment equal to the difference between the estimated fair value and the carrying value of the asset or asset group. In addition, the firm will recognize an impairment prior to the sale of an asset if the carrying value of the asset exceeds its estimated fair value.

During 2018, 2017 and 2016, impairments were not material to the firm's results of operations or financial condition.

Note 14.

Deposits

The table below presents the types and sources of deposits.

$ in millions	Savings and Demand	Time	Total
As of December 2018			
Private bank deposits	**$52,028**	**$ 2,311**	**$ 54,339**
Consumer deposits	**27,987**	**7,641**	**35,628**
Brokered certificates of deposit	**–**	**35,876**	**35,876**
Deposit sweep programs	**15,903**	**–**	**15,903**
Institutional deposits	**1**	**16,510**	**16,511**
Total	**$95,919**	**$62,338**	**$158,257**
As of December 2017			
Private bank deposits	$50,579	$ 1,623	$ 52,202
Consumer deposits	13,787	3,330	17,117
Brokered certificates of deposit	–	35,704	35,704
Deposit sweep programs	16,019	–	16,019
Institutional deposits	1	17,561	17,562
Total	$80,386	$58,218	$138,604

In the table above:

- Substantially all deposits are interest-bearing.
- Savings and demand accounts consist of money market deposit accounts, negotiable order of withdrawal accounts and demand deposit accounts that have no stated maturity or expiration date.
- Time deposits included $21.06 billion as of December 2018 and $22.90 billion as of December 2017 of deposits accounted for at fair value under the fair value option. See Note 8 for further information about deposits accounted for at fair value.
- Time deposits had a weighted average maturity of approximately 1.8 years as of December 2018 and 2.0 years as of December 2017.
- Deposit sweep programs represent long-term contractual agreements with several U.S. broker-dealers who sweep client cash to FDIC-insured deposits. As of both December 2018 and December 2017, the firm had eight deposit sweep program contractual arrangements.
- Deposits insured by the FDIC were $86.27 billion as of December 2018 and $75.02 billion as of December 2017.
- Deposits insured by the U.K.'s Financial Services Compensation Scheme were $6.05 billion as of December 2018 and $227 million as of December 2017.

The table below presents deposits held in U.S. and non-U.S. offices.

	As of December	
$ in millions	**2018**	2017
U.S. offices	**$126,444**	$111,002
Non-U.S. offices	**31,813**	27,602
Total	**$158,257**	$138,604

In the table above, U.S. deposits were held at Goldman Sachs Bank USA (GS Bank USA) and substantially all non-U.S. deposits were held at Goldman Sachs International Bank (GSIB).

The table below presents maturities of time deposits held in U.S. and non-U.S. offices.

	As of December 2018		
$ in millions	**U.S.**	**Non-U.S.**	**Total**
2019	**$18,787**	**$ 15,138**	**$ 33,925**
2020	**7,328**	**941**	**8,269**
2021	**5,512**	**41**	**5,553**
2022	**5,142**	**83**	**5,225**
2023	**4,546**	**57**	**4,603**
2024 - thereafter	**3,901**	**862**	**4,763**
Total	**$45,216**	**$ 17,122**	**$ 62,338**

As of December 2018, deposits in U.S. offices included $3.78 billion and non-U.S. offices included $17.12 billion of time deposits in denominations that met or exceeded the applicable insurance limits, or were otherwise not covered by insurance.

The firm's savings and demand deposits are recorded based on the amount of cash received plus accrued interest, which approximates fair value. In addition, the firm designates certain derivatives as fair value hedges to convert a portion of its time deposits not accounted for at fair value from fixed-rate obligations into floating-rate obligations. The carrying value of time deposits not accounted for at fair value approximated fair value as of both December 2018 and December 2017. As these savings and demand deposits and time deposits are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these deposits been included in the firm's fair value hierarchy, they would have been classified in level 2 as of both December 2018 and December 2017.

Note 15.
Short-Term Borrowings

The table below presents information about short-term borrowings.

	As of December	
$ in millions	**2018**	2017
Other secured financings (short-term)	**$ 9,555**	$14,896
Unsecured short-term borrowings	**40,502**	46,922
Total	**$50,057**	$61,818

See Note 10 for information about other secured financings.

Unsecured short-term borrowings includes the portion of unsecured long-term borrowings maturing within one year of the financial statement date and unsecured long-term borrowings that are redeemable within one year of the financial statement date at the option of the holder.

The firm accounts for certain hybrid financial instruments at fair value under the fair value option. See Note 8 for further information about unsecured short-term borrowings that are accounted for at fair value. In addition, the firm designates certain derivatives as fair value hedges to convert a portion of its unsecured short-term borrowings not accounted for at fair value from fixed-rate obligations into floating-rate obligations. The carrying value of unsecured short-term borrowings that are not recorded at fair value generally approximates fair value due to the short-term nature of the obligations. As these unsecured short-term borrowings are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of both December 2018 and December 2017.

The table below presents information about unsecured short-term borrowings.

	As of December	
$ in millions	**2018**	2017
Current portion of unsecured long-term borrowings	**$27,476**	$30,090
Hybrid financial instruments	**10,908**	12,973
Other unsecured short-term borrowings	**2,118**	3,859
Total unsecured short-term borrowings	**$40,502**	$46,922
Weighted average interest rate	**2.51%**	2.28%

In the table above:

- The current portion of unsecured long-term borrowings included $20.91 billion as of December 2018 and $26.28 billion as of December 2017 issued by Group Inc.
- The weighted average interest rates for these borrowings include the effect of hedging activities and exclude unsecured short-term borrowings accounted for at fair value under the fair value option. See Note 7 for further information about hedging activities.

Note 16.

Long-Term Borrowings

The table below presents information about long-term borrowings.

	As of December	
$ in millions	**2018**	2017
Other secured financings (long-term)	**$ 11,878**	$ 9,892
Unsecured long-term borrowings	**224,149**	217,687
Total	**$236,027**	$227,579

See Note 10 for information about other secured financings.

The table below presents information about unsecured long-term borrowings.

$ in millions	U.S. Dollar	Non-U.S. Dollar	Total
As of December 2018			
Fixed-rate obligations:			
Group Inc.	**$ 97,354**	**$34,030**	**$131,384**
Subsidiaries	**2,581**	**2,624**	**5,205**
Floating-rate obligations:			
Group Inc.	**30,565**	**21,157**	**51,722**
Subsidiaries	**23,756**	**12,082**	**35,838**
Total	**$154,256**	**$69,893**	**$224,149**
As of December 2017			
Fixed-rate obligations:			
Group Inc.	$101,791	$35,116	$136,907
Subsidiaries	2,244	1,859	4,103
Floating-rate obligations:			
Group Inc.	29,637	23,938	53,575
Subsidiaries	14,977	8,125	23,102
Total	$148,649	$69,038	$217,687

In the table above:

- Unsecured long-term borrowings consists principally of senior borrowings, which have maturities extending through 2067.
- Floating-rate obligations includes equity-linked and indexed instruments. Floating interest rates are generally based on LIBOR or Euro Interbank Offered Rate.
- U.S. dollar-denominated debt had interest rates ranging from 2.00% to 10.04% (with a weighted average rate of 4.22%) as of December 2018 and 1.60% to 10.04% (with a weighted average rate of 4.24%) as of December 2017. These rates exclude unsecured long-term borrowings accounted for at fair value under the fair value option.
- Non-U.S. dollar-denominated debt had interest rates ranging from 0.31% to 13.00% (with a weighted average rate of 2.43%) as of December 2018 and 0.31% to 13.00% (with a weighted average rate of 2.60%) as of December 2017. These rates exclude unsecured long-term borrowings accounted for at fair value under the fair value option.

The table below presents unsecured long-term borrowings by maturity.

	As of December 2018		
$ in millions	**Group Inc.**	**Subsidiaries**	**Total**
2020	**$ 22,343**	**$ 7,028**	**$ 29,371**
2021	**20,128**	**2,836**	**22,964**
2022	**21,191**	**2,268**	**23,459**
2023	**21,566**	**6,306**	**27,872**
2024 - thereafter	**97,878**	**22,605**	**120,483**
Total	**$183,106**	**$41,043**	**$224,149**

In the table above:

- Unsecured long-term borrowings maturing within one year of the financial statement date and unsecured long-term borrowings that are redeemable within one year of the financial statement date at the option of the holder are excluded as they are included in unsecured short-term borrowings.
- Unsecured long-term borrowings that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Unsecured long-term borrowings that are redeemable prior to maturity at the option of the holder are reflected at the earliest dates such options become exercisable.
- Unsecured long-term borrowings included $4.24 billion of adjustments to the carrying value of certain unsecured long-term borrowings resulting from the application of hedge accounting by year of maturity as follows: $94 million in 2020, $259 million in 2021, $(69) million in 2022, $(36) million in 2023, and $3.99 billion in 2024 and thereafter.

During 2018, the firm repurchased unsecured short-term and long-term borrowings with a principal amount of $4.10 billion (carrying value of $4.53 billion) for $4.37 billion and recognized a net gain of $160 million, of which $112 million was included in the Institutional Client Services segment and $48 million was included in the Investing & Lending segment.

The firm designates certain derivatives as fair value hedges to convert a portion of fixed-rate unsecured long-term borrowings not accounted for at fair value into floating-rate obligations. See Note 7 for further information about hedging activities.

The table below presents unsecured long-term borrowings, after giving effect to such hedging activities.

$ in millions	Group Inc.	Subsidiaries	Total
As of December 2018			
Fixed-rate obligations:			
At fair value	**$ –**	**$ 28**	**$ 28**
At amortized cost	**71,221**	**3,331**	**74,552**
Floating-rate obligations:			
At fair value	**16,387**	**30,169**	**46,556**
At amortized cost	**95,498**	**7,515**	**103,013**
Total	**$183,106**	**$41,043**	**$224,149**
As of December 2017			
Fixed-rate obligations:			
At fair value	$ –	$ 147	$ 147
At amortized cost	86,951	3,852	90,803
Floating-rate obligations:			
At fair value	18,207	20,284	38,491
At amortized cost	85,324	2,922	88,246
Total	$190,482	$27,205	$217,687

In the table above, the aggregate amounts of unsecured long-term borrowings had weighted average interest rates of 3.21% (3.79% related to fixed-rate obligations and 2.79% related to floating-rate obligations) as of December 2018 and 2.86% (3.67% related to fixed-rate obligations and 2.02% related to floating-rate obligations) as of December 2017. These rates exclude unsecured long-term borrowings accounted for at fair value under the fair value option.

As of December 2018 and December 2017, the carrying value of unsecured long-term borrowings for which the firm did not elect the fair value option approximated fair value. As these borrowings are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of both December 2018 and December 2017.

Subordinated Borrowings

Unsecured long-term borrowings includes subordinated debt and junior subordinated debt. Junior subordinated debt is junior in right of payment to other subordinated borrowings, which are junior to senior borrowings. Subordinated debt had maturities ranging from 2021 to 2045 as of December 2018 and 2020 to 2045 as of December 2017. Subordinated debt that matures within one year is included in unsecured short-term borrowings.

The table below presents information about subordinated borrowings.

$ in millions	Par Amount	Carrying Value	Rate
As of December 2018			
Subordinated debt	**$14,023**	**$15,703**	**4.09%**
Junior subordinated debt	**1,140**	**1,425**	**3.19%**
Total	**$15,163**	**$17,128**	**4.02%**
As of December 2017			
Subordinated debt	$14,117	$16,235	3.31%
Junior subordinated debt	1,168	1,539	2.37%
Total	$15,285	$17,774	3.24%

In the table above:

- The par amount of subordinated debt issued by Group Inc. was $14.02 billion as of December 2018 and $13.96 billion as of December 2017, and the carrying value of subordinated debt issued by Group Inc. was $15.70 billion as of December 2018 and $16.08 billion as of December 2017.
- The rate is the weighted average interest rate for these borrowings (excluding borrowings accounted for at fair value under the fair value option), including the effect of fair value hedges used to convert fixed-rate obligations into floating-rate obligations. See Note 7 for further information about hedging activities.

Junior Subordinated Debt

In 2004, Group Inc. issued $2.84 billion of junior subordinated debt to Goldman Sachs Capital I (Trust), a Delaware statutory trust. The Trust issued $2.75 billion of guaranteed preferred beneficial interests (Trust Preferred Securities) to third parties and $85 million of common beneficial interests to Group Inc. and used the proceeds from the issuances to purchase the junior subordinated debt from Group Inc. As of December 2018, the outstanding par amount of junior subordinated debt held by the Trust was $1.14 billion and the outstanding par amount of Trust Preferred Securities and common beneficial interests issued by the Trust was $1.11 billion and $34.1 million, respectively. During 2018, the firm purchased $27.8 million (par amount) of Trust Preferred Securities and delivered these securities, along with $1.0 million of common beneficial interests, to the Trust in exchange for a corresponding par amount of the junior subordinated debt. Following the exchanges, these Trust Preferred Securities, common beneficial interests and junior subordinated debt were extinguished. As of December 2017, the outstanding par amount of junior subordinated debt held by the Trust was $1.17 billion and the outstanding par amount of Trust Preferred Securities and common beneficial interests issued by the Trust was $1.13 billion and $35.1 million, respectively. The Trust is a wholly-owned finance subsidiary of the firm for regulatory and legal purposes but is not consolidated for accounting purposes.

The firm pays interest semi-annually on the junior subordinated debt at an annual rate of 6.345% and the debt matures on February 15, 2034. The coupon rate and the payment dates applicable to the beneficial interests are the same as the interest rate and payment dates for the junior subordinated debt. The firm has the right, from time to time, to defer payment of interest on the junior subordinated debt, and therefore cause payment on the Trust's preferred beneficial interests to be deferred, in each case up to ten consecutive semi-annual periods. During any such deferral period, the firm will not be permitted to, among other things, pay dividends on or make certain repurchases of its common stock. The Trust is not permitted to pay any distributions on the common beneficial interests held by Group Inc. unless all dividends payable on the preferred beneficial interests have been paid in full.

The firm has covenanted in favor of the holders of Group Inc.'s 6.345% junior subordinated debt due February 15, 2034, that, subject to certain exceptions, the firm will not redeem or purchase the capital securities issued by Goldman Sachs Capital II and Goldman Sachs Capital III (APEX Trusts) or shares of Group Inc.'s Perpetual Non-Cumulative Preferred Stock, Series E (Series E Preferred Stock), Perpetual Non-Cumulative Preferred Stock, Series F (Series F Preferred Stock) or Perpetual Non-Cumulative Preferred Stock, Series O, if the redemption or purchase results in less than $253 million aggregate liquidation preference of that series outstanding, prior to specified dates in 2022 for a price that exceeds a maximum amount determined by reference to the net cash proceeds that the firm has received from the sale of qualifying securities.

The APEX Trusts hold Group Inc.'s Series E Preferred Stock and Series F Preferred Stock. These trusts are Delaware statutory trusts sponsored by the firm and wholly-owned finance subsidiaries of the firm for regulatory and legal purposes but are not consolidated for accounting purposes.

Note 17.

Other Liabilities

The table below presents other liabilities by type.

	As of December	
$ in millions	**2018**	2017
Compensation and benefits	**$ 6,834**	$ 6,710
Income tax-related liabilities	**2,864**	4,051
Noncontrolling interests	**1,568**	553
Employee interests in consolidated funds	**122**	156
Accrued expenses and other	**6,219**	5,452
Total	**$17,607**	$16,922

In the table above:

- The decrease in income tax-related liabilities from December 2017 to December 2018 reflected a decrease in the net deferred tax liability related to the Tax Legislation repatriation tax, which became current and was netted against current tax receivables. See Note 24 for further information about Tax Legislation.
- The increase in noncontrolling interests from December 2017 to December 2018 primarily reflected a noncontrolling interest in a consolidated special purpose acquisition company, which completed its initial public offering during the second quarter of 2018.
- Beginning in January 2018, accrued expenses and other includes contract liabilities, which represent consideration received by the firm, in connection with its contracts with clients, prior to providing the service. As of December 2018, the firm's contract liabilities were not material.

Note 18.

Commitments, Contingencies and Guarantees

Commitments

The table below presents commitments by type.

	As of December	
$ in millions	**2018**	2017
Commercial lending:		
Investment-grade	**$ 81,729**	$ 93,115
Non-investment-grade	**51,793**	45,291
Warehouse financing	**4,060**	5,340
Total lending commitments	**137,582**	143,746
Contingent and forward starting collateralized agreements	**54,480**	41,756
Forward starting collateralized financings	**15,429**	16,902
Letters of credit	**445**	437
Investment commitments	**7,595**	6,840
Other	**4,892**	6,310
Total commitments	**$220,423**	$215,991

The table below presents commitments by expiration.

	As of December 2018			
$ in millions	**2019**	**2020 - 2021**	**2022 - 2023**	**2024 - Thereafter**
Commercial lending:				
Investment-grade	**$13,101**	**$27,859**	**$39,409**	**$ 1,360**
Non-investment-grade	**4,884**	**11,851**	**26,803**	**8,255**
Warehouse financing	**699**	**2,143**	**589**	**629**
Total lending commitments	**18,684**	**41,853**	**66,801**	**10,244**
Contingent and forward starting collateralized agreements	**54,477**	**–**	**3**	**–**
Forward starting collateralized financings	**15,429**	**–**	**–**	**–**
Letters of credit	**401**	**1**	**3**	**40**
Investment commitments	**3,587**	**819**	**1,203**	**1,986**
Other	**4,815**	**77**	**–**	**–**
Total commitments	**$97,393**	**$42,750**	**$68,010**	**$12,270**

Lending Commitments

The firm's lending commitments are agreements to lend with fixed termination dates and depend on the satisfaction of all contractual conditions to borrowing. These commitments are presented net of amounts syndicated to third parties. The total commitment amount does not necessarily reflect actual future cash flows because the firm may syndicate all or substantial additional portions of these commitments. In addition, commitments can expire unused or be reduced or cancelled at the counterparty's request.

The table below presents information about lending commitments.

	As of December	
$ in millions	**2018**	2017
Held for investment	**$120,997**	$124,504
Held for sale	**8,602**	9,838
At fair value	**7,983**	9,404
Total	**$137,582**	$143,746

In the table above:

- Held for investment lending commitments are accounted for on an accrual basis. See Note 9 for further information about such commitments.
- Held for sale lending commitments are accounted for at the lower of cost or fair value.
- Gains or losses related to lending commitments at fair value, if any, are generally recorded, net of any fees in other principal transactions.
- Substantially all lending commitments relates to the firm's Investing & Lending segment.

Commercial Lending. The firm's commercial lending commitments were primarily extended to investment-grade corporate borrowers. Such commitments included $93.99 billion as of December 2018 and $85.98 billion as of December 2017, related to relationship lending activities (principally used for operating and general corporate purposes) and $27.92 billion as of December 2018 and $42.41 billion as of December 2017, related to other investment banking activities (generally extended for contingent acquisition financing and are often intended to be short-term in nature, as borrowers often seek to replace them with other funding sources). The firm also extends lending commitments in connection with other types of corporate lending, as well as commercial real estate financing. See Note 9 for further information about funded loans.

Sumitomo Mitsui Financial Group, Inc. (SMFG) provides the firm with credit loss protection on certain approved loan commitments (primarily investment-grade commercial lending commitments). The notional amount of such loan commitments was $15.52 billion as of December 2018 and $25.70 billion as of December 2017. The credit loss protection on loan commitments provided by SMFG is generally limited to 95% of the first loss the firm realizes on such commitments, up to a maximum of approximately $950 million. In addition, subject to the satisfaction of certain conditions, upon the firm's request, SMFG will provide protection for 70% of additional losses on such commitments, up to a maximum of $1.0 billion, of which $550 million of protection had been provided as of both December 2018 and December 2017. The firm also uses other financial instruments to mitigate credit risks related to certain commitments not covered by SMFG. These instruments primarily include credit default swaps that reference the same or similar underlying instrument or entity, or credit default swaps that reference a market index.

Warehouse Financing. The firm provides financing to clients who warehouse financial assets. These arrangements are secured by the warehoused assets, primarily consisting of consumer and corporate loans.

Contingent and Forward Starting Collateralized Agreements / Forward Starting Collateralized Financings

Forward starting collateralized agreements includes resale and securities borrowing agreements, and forward starting collateralized financings includes repurchase and secured lending agreements that settle at a future date, generally within three business days. The firm also enters into commitments to provide contingent financing to its clients and counterparties through resale agreements. The firm's funding of these commitments depends on the satisfaction of all contractual conditions to the resale agreement and these commitments can expire unused.

Letters of Credit

The firm has commitments under letters of credit issued by various banks which the firm provides to counterparties in lieu of securities or cash to satisfy various collateral and margin deposit requirements.

Investment Commitments

Investment commitments includes commitments to invest in private equity, real estate and other assets directly and through funds that the firm raises and manages. Investment commitments included $2.42 billion as of December 2018 and $2.09 billion as of December 2017, related to commitments to invest in funds managed by the firm. If these commitments are called, they would be funded at market value on the date of investment.

Leases

The firm has contractual obligations under long-term noncancelable lease agreements for office space expiring on various dates through 2069. Certain agreements are subject to periodic escalation provisions for increases in real estate taxes and other charges.

The table below presents future minimum rental payments, net of minimum sublease rentals.

$ in millions	As of December 2018
2019	**$ 281**
2020	**271**
2021	**218**
2022	**177**
2023	**142**
2024 - thereafter	**1,310**
Total	**$2,399**

Rent charged to operating expense was $292 million for 2018, $273 million for 2017 and $244 million for 2016.

The amounts in the table above do not include lease payments arising from the sale and leaseback of the firm's new European headquarters as this agreement closed in January 2019. See Note 13 for further information about the sale and leaseback agreement.

Operating leases include office space held in excess of current requirements. Rent expense relating to space held for growth is included in occupancy expenses. The firm records a liability, based on the fair value of the remaining lease rentals reduced by any potential or existing sublease rentals, for leases where the firm has ceased using the space and management has concluded that the firm will not derive any future economic benefits. Costs to terminate a lease before the end of its term are recognized and measured at fair value on termination. Total occupancy expenses for space held in excess of the firm's current requirements and exit costs related to its office space were not material for both 2018 and 2017, and were approximately $68 million for 2016.

Contingencies

Legal Proceedings. See Note 27 for information about legal proceedings, including certain mortgage-related matters, and agreements the firm has entered into to toll the statute of limitations.

Certain Mortgage-Related Contingencies. During the period 2005 through 2008 in connection with both sales and securitizations of loans, the firm provided loan-level representations and/or assigned the loan-level representations from the party from whom the firm purchased the loans.

The firm's exposure to claims for repurchase of residential mortgage loans based on alleged breaches of representations will depend on a number of factors such as the extent to which these claims are made within the statute of limitations, taking into consideration the agreements to toll the statute of limitations the firm entered into with trustees representing certain trusts. Based upon the large number of defaults in residential mortgages, including those sold or securitized by the firm, there is a potential for repurchase claims. However, the firm is not in a position to make a meaningful estimate of that exposure at this time.

Other Contingencies. In connection with the sale of Metro International Trade Services (Metro), the firm agreed to provide indemnities to the buyer, which primarily relate to fundamental representations and warranties, and potential liabilities for legal or regulatory proceedings arising out of the conduct of Metro's business while the firm owned it.

In connection with the settlement agreement with the Residential Mortgage-Backed Securities Working Group of the U.S. Financial Fraud Enforcement Task Force, the firm agreed to provide $1.80 billion in consumer relief by January 2021. As of December 2018, approximately $1.20 billion of such relief was provided. This relief was provided in the form of principal forgiveness for underwater homeowners and distressed borrowers; financing for construction, rehabilitation and preservation of affordable housing; and support for debt restructuring, foreclosure prevention and housing quality improvement programs, as well as land banks.

Guarantees

The table below presents derivatives that meet the definition of a guarantee, securities lending indemnifications and certain other financial guarantees.

$ in millions	Derivatives	Securities lending indemnifications	Other financial guarantees
As of December 2018			
Carrying Value of Net Liability	**$ 4,105**	**$ –**	**$ 38**
Maximum Payout/Notional Amount by Period of Expiration			
2019	**$101,169**	**$27,869**	**$1,379**
2020 - 2021	**77,955**	**–**	**2,252**
2022 - 2023	**17,813**	**–**	**2,021**
2024 - thereafter	**67,613**	**–**	**241**
Total	**$264,550**	**$27,869**	**$5,893**
As of December 2017			
Carrying Value of Net Liability	$ 3,843	$ –	$ 37
Maximum Payout/Notional Amount by Period of Expiration			
2018	$113,766	$37,959	$ 723
2019 - 2020	59,314	–	1,515
2021 - 2022	24,712	–	1,209
2023 - thereafter	45,343	–	137
Total	$243,135	$37,959	$3,584

In the table above:

- The maximum payout is based on the notional amount of the contract and does not represent anticipated losses.
- Amounts exclude certain commitments to issue standby letters of credit that are included in lending commitments. See the tables in "Commitments" above for a summary of the firm's commitments.
- The carrying value for derivatives included derivative assets of $1.48 billion as of December 2018 and $1.33 billion as of December 2017, and derivative liabilities of $5.59 billion as of December 2018 and $5.17 billion as of December 2017.

Derivative Guarantees. The firm enters into various derivatives that meet the definition of a guarantee under U.S. GAAP, including written equity and commodity put options, written currency contracts and interest rate caps, floors and swaptions. These derivatives are risk managed together with derivatives that do not meet the definition of a guarantee, and therefore the amounts in the table above do not reflect the firm's overall risk related to derivative activities. Disclosures about derivatives are not required if they may be cash settled and the firm has no basis to conclude it is probable that the counterparties held the underlying instruments at inception of the contract. The firm has concluded that these conditions have been met for certain large, internationally active commercial and investment bank counterparties, central clearing counterparties and certain other counterparties. Accordingly, the firm has not included such contracts in the table above. In addition, during 2018, the firm concluded that these conditions have also been met for hedge fund counterparties and, therefore, has not included contracts with these counterparties in the table above. Prior periods have been conformed to the current presentation. See Note 7 for information about credit derivatives that meet the definition of a guarantee, which are not included in the table above.

Derivatives are accounted for at fair value and therefore the carrying value is considered the best indication of payment/performance risk for individual contracts. However, the carrying values in the table above exclude the effect of counterparty and cash collateral netting.

Securities Lending Indemnifications. The firm, in its capacity as an agency lender, indemnifies most of its securities lending customers against losses incurred in the event that borrowers do not return securities and the collateral held is insufficient to cover the market value of the securities borrowed. Collateral held by the lenders in connection with securities lending indemnifications was $28.75 billion as of December 2018 and $39.03 billion as of December 2017. Because the contractual nature of these arrangements requires the firm to obtain collateral with a market value that exceeds the value of the securities lent to the borrower, there is minimal performance risk associated with these guarantees.

Other Financial Guarantees. In the ordinary course of business, the firm provides other financial guarantees of the obligations of third parties (e.g., standby letters of credit and other guarantees to enable clients to complete transactions and fund-related guarantees). These guarantees represent obligations to make payments to beneficiaries if the guaranteed party fails to fulfill its obligation under a contractual arrangement with that beneficiary.

Guarantees of Securities Issued by Trusts. The firm has established trusts, including Goldman Sachs Capital I, the APEX Trusts and other entities for the limited purpose of issuing securities to third parties, lending the proceeds to the firm and entering into contractual arrangements with the firm and third parties related to this purpose. The firm does not consolidate these entities. See Note 16 for further information about the transactions involving Goldman Sachs Capital I and the APEX Trusts.

The firm effectively provides for the full and unconditional guarantee of the securities issued by these entities. Timely payment by the firm of amounts due to these entities under the guarantee, borrowing, preferred stock and related contractual arrangements will be sufficient to cover payments due on the securities issued by these entities.

Management believes that it is unlikely that any circumstances will occur, such as nonperformance on the part of paying agents or other service providers, that would make it necessary for the firm to make payments related to these entities other than those required under the terms of the guarantee, borrowing, preferred stock and related contractual arrangements and in connection with certain expenses incurred by these entities.

Indemnities and Guarantees of Service Providers. In the ordinary course of business, the firm indemnifies and guarantees certain service providers, such as clearing and custody agents, trustees and administrators, against specified potential losses in connection with their acting as an agent of, or providing services to, the firm or its affiliates.

The firm may also be liable to some clients or other parties for losses arising from its custodial role or caused by acts or omissions of third-party service providers, including sub-custodians and third-party brokers. In certain cases, the firm has the right to seek indemnification from these third-party service providers for certain relevant losses incurred by the firm. In addition, the firm is a member of payment, clearing and settlement networks, as well as securities exchanges around the world that may require the firm to meet the obligations of such networks and exchanges in the event of member defaults and other loss scenarios.

In connection with the firm's prime brokerage and clearing businesses, the firm agrees to clear and settle on behalf of its clients the transactions entered into by them with other brokerage firms. The firm's obligations in respect of such transactions are secured by the assets in the client's account, as well as any proceeds received from the transactions cleared and settled by the firm on behalf of the client. In connection with joint venture investments, the firm may issue loan guarantees under which it may be liable in the event of fraud, misappropriation, environmental liabilities and certain other matters involving the borrower.

The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these guarantees and indemnifications have been recognized in the consolidated statements of financial condition as of both December 2018 and December 2017.

Other Representations, Warranties and Indemnifications. The firm provides representations and warranties to counterparties in connection with a variety of commercial transactions and occasionally indemnifies them against potential losses caused by the breach of those representations and warranties. The firm may also provide indemnifications protecting against changes in or adverse application of certain U.S. tax laws in connection with ordinary-course transactions such as securities issuances, borrowings or derivatives.

In addition, the firm may provide indemnifications to some counterparties to protect them in the event additional taxes are owed or payments are withheld, due either to a change in or an adverse application of certain non-U.S. tax laws.

These indemnifications generally are standard contractual terms and are entered into in the ordinary course of business. Generally, there are no stated or notional amounts included in these indemnifications, and the contingencies triggering the obligation to indemnify are not expected to occur. The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these arrangements have been recognized in the consolidated statements of financial condition as of both December 2018 and December 2017.

Guarantees of Subsidiaries. Group Inc. fully and unconditionally guarantees the securities issued by GS Finance Corp., a wholly-owned finance subsidiary of the firm. Group Inc. has guaranteed the payment obligations of Goldman Sachs & Co. LLC (GS&Co.) and GS Bank USA, subject to certain exceptions.

Group Inc. guarantees many of the obligations of its other consolidated subsidiaries on a transaction-by-transaction basis, as negotiated with counterparties. Group Inc. is unable to develop an estimate of the maximum payout under its subsidiary guarantees; however, because these obligations are also obligations of consolidated subsidiaries, Group Inc.'s liabilities as guarantor are not separately disclosed.

Note 19.
Shareholders' Equity

Common Equity

As of both December 2018 and December 2017, the firm had 4.00 billion authorized shares of common stock and 200 million authorized shares of nonvoting common stock, each with a par value of $0.01 per share.

The firm's share repurchase program is intended to help maintain the appropriate level of common equity. The share repurchase program is effected primarily through regular open-market purchases (which may include repurchase plans designed to comply with Rule 10b5-1), the amounts and timing of which are determined primarily by the firm's current and projected capital position, and capital deployment opportunities, but which may also be influenced by general market conditions and the prevailing price and trading volumes of the firm's common stock. Prior to repurchasing common stock, the firm must receive confirmation that the FRB does not object to such capital action.

The table below presents the amount of common stock repurchased under the share repurchase program.

	Year Ended December		
in millions, except per share amounts	**2018**	2017	2016
Common share repurchases	**13.9**	29.0	36.6
Average cost per share	**$236.22**	$231.87	$165.88
Total cost of common share repurchases	**$ 3,294**	$ 6,721	$ 6,069

Pursuant to the terms of certain share-based compensation plans, employees may remit shares to the firm or the firm may cancel share-based awards to satisfy statutory employee tax withholding requirements and the exercise price of stock options. Under these plans, 1,120 shares in 2018, 12,165 shares in 2017, and 49,374 shares in 2016 were remitted with a total value of $0.3 million in 2018, $3 million in 2017 and $7 million in 2016, and the firm cancelled 5.0 million share-based awards in 2018, 12.7 million in 2017 and 11.6 million in 2016 with a total value of $1.24 billion in 2018, $3.03 billion in 2017 and $2.03 billion in 2016.

The table below presents common stock dividends declared.

	Year Ended December		
	2018	2017	2016
Dividends declared per common share	**$ 3.15**	$ 2.90	$ 2.60

On January 15, 2019, the Board of Directors of Group Inc. (Board) declared a dividend of $0.80 per common share to be paid on March 28, 2019 to common shareholders of record on February 28, 2019.

Preferred Equity

The tables below present information about the perpetual preferred stock issued and outstanding as of December 2018.

Series	Shares Authorized	Shares Issued	Shares Outstanding	Depositary Shares Per Share
A	50,000	30,000	29,999	1,000
B	50,000	6,000	6,000	1,000
C	25,000	8,000	8,000	1,000
D	60,000	54,000	53,999	1,000
E	17,500	7,667	7,667	N/A
F	5,000	1,615	1,615	N/A
J	46,000	40,000	40,000	1,000
K	32,200	28,000	28,000	1,000
L	52,000	52,000	52,000	25
M	80,000	80,000	80,000	25
N	31,050	27,000	27,000	1,000
O	26,000	26,000	26,000	25
P	66,000	60,000	60,000	25
Total	**540,750**	**420,282**	**420,280**	

Series	Earliest Redemption Date	Liquidation Preference	Redemption Value *($ in millions)*
A	Currently redeemable	$ 25,000	**$ 750**
B	Currently redeemable	$ 25,000	**150**
C	Currently redeemable	$ 25,000	**200**
D	Currently redeemable	$ 25,000	**1,350**
E	Currently redeemable	$100,000	**767**
F	Currently redeemable	$100,000	**161**
J	May 10, 2023	$ 25,000	**1,000**
K	May 10, 2024	$ 25,000	**700**
L	May 10, 2019	$ 25,000	**1,300**
M	May 10, 2020	$ 25,000	**2,000**
N	May 10, 2021	$ 25,000	**675**
O	November 10, 2026	$ 25,000	**650**
P	November 10, 2022	$ 25,000	**1,500**
Total			**$11,203**

In the tables above:

- All shares have a par value of $0.01 per share and, where applicable, each share is represented by the specified number of depositary shares.
- The earliest redemption date represents the date on which each share of non-cumulative Preferred Stock is redeemable at the firm's option.
- Prior to redeeming preferred stock, the firm must receive confirmation that the FRB does not object to such action.
- The redemption price per share for Series A through F Preferred Stock is the liquidation preference plus declared and unpaid dividends. The redemption price per share for Series J through P Preferred Stock is the liquidation preference plus accrued and unpaid dividends. Each share of non-cumulative Series E and Series F Preferred Stock issued and outstanding is redeemable at the firm's option, subject to certain covenant restrictions governing the firm's ability to redeem the preferred stock without issuing common stock or other instruments with equity-like characteristics. See Note 16 for information about the replacement capital covenants applicable to the Series E and Series F Preferred Stock.
- All series of preferred stock are pari passu and have a preference over the firm's common stock on liquidation.
- The firm's ability to declare or pay dividends on, or purchase, redeem or otherwise acquire, its common stock is subject to certain restrictions in the event that the firm fails to pay or set aside full dividends on the preferred stock for the latest completed dividend period.

In 2018, the firm redeemed 26,000 shares of its outstanding Series B 6.20% Non-Cumulative Preferred Stock (Series B Preferred Stock) with a redemption value of $650 million ($25,000 per share). The difference between the redemption value of the Series B Preferred Stock and the net carrying value at the time of redemption was $15 million, which was recorded as an addition to preferred stock dividends in 2018.

In 2017, the firm redeemed the 34,000 shares of Series I 5.95% Non-Cumulative Preferred Stock (Series I Preferred Stock) for the stated redemption price of $850 million ($25,000 per share), plus accrued and unpaid dividends. The difference between the redemption value of the Series I Preferred Stock and the net carrying value at the time of redemption was $14 million, which was recorded as an addition to preferred stock dividends in 2017.

In 2016, the firm delivered a par amount of $1.32 billion (fair value of $1.04 billion) of APEX to the APEX Trusts in exchange for 9,833 shares of Series E Preferred Stock and 3,385 shares of Series F Preferred Stock for a total redemption value of $1.32 billion (net carrying value of $1.31 billion). Following the exchange, these shares of Series E and Series F Preferred Stock were cancelled. The difference between the fair value of the APEX and the net carrying value of the preferred stock at the time of cancellation was $266 million, which was recorded as a reduction to preferred stock dividends in 2016.

The table below presents the dividend rates of perpetual preferred stock as of December 2018.

Series	Per Annum Dividend Rate
A	3 month LIBOR + 0.75%, with floor of 3.75%, payable quarterly
B	6.20%, payable quarterly
C	3 month LIBOR + 0.75%, with floor of 4.00%, payable quarterly
D	3 month LIBOR + 0.67%, with floor of 4.00%, payable quarterly
E	3 month LIBOR + 0.77%, with floor of 4.00%, payable quarterly
F	3 month LIBOR + 0.77%, with floor of 4.00%, payable quarterly
J	5.50% to, but excluding, May 10, 2023; 3 month LIBOR + 3.64% thereafter, payable quarterly
K	6.375% to, but excluding, May 10, 2024; 3 month LIBOR + 3.55% thereafter, payable quarterly
L	5.70%, payable semi-annually, from issuance date to, but excluding, May 10, 2019; 3 month LIBOR + 3.884%, payable quarterly, thereafter
M	5.375%, payable semi-annually, from issuance date to, but excluding, May 10, 2020; 3 month LIBOR + 3.922%, payable quarterly, thereafter
N	6.30%, payable quarterly
O	5.30%, payable semi-annually, from issuance date to, but excluding, November 10, 2026; 3 month LIBOR + 3.834%, payable quarterly, thereafter
P	5.00%, payable semi-annually, from issuance date to, but excluding, November 10, 2022; 3 month LIBOR + 2.874%, payable quarterly, thereafter

In the table above, dividends on each series of preferred stock are payable in arrears for the periods specified.

The table below presents preferred stock dividends declared.

	Year Ended December					
	2018		2017		2016	
Series	***per share***	***$ in millions***	*per share*	*$ in millions*	*per share*	*$ in millions*
A	**$ 958.33**	**$ 29**	$ 950.51	$ 29	$ 953.12	$ 29
B	**$1,550.00**	**19**	$1,550.00	50	$1,550.00	50
C	**$1,022.23**	**8**	$1,013.90	8	$1,016.68	8
D	**$1,022.23**	**55**	$1,013.90	55	$1,016.68	55
E	**$4,077.78**	**31**	$4,055.55	31	$4,066.66	50
F	**$4,077.78**	**7**	$4,055.55	6	$4,066.66	13
I	**$ –**	**–**	$1,487.52	51	$1,487.52	51
J	**$1,375.00**	**55**	$1,375.00	55	$1,375.00	55
K	**$1,593.76**	**45**	$1,593.76	45	$1,593.76	45
L	**$1,425.00**	**74**	$1,425.00	74	$1,425.00	74
M	**$1,343.76**	**107**	$1,343.76	107	$1,343.76	107
N	**$1,575.00**	**43**	$1,575.00	42	$1,124.38	30
O	**$1,325.00**	**34**	$1,325.00	34	$ 379.10	10
P	**$1,281.25**	**77**	$ –	–	$ –	–
Total		**$584**		$587		$577

In the table above, the total preferred dividend amounts for Series E and Series F Preferred Stock for 2016 include prorated dividends of $866.67 per share related to 4,861 shares of Series E Preferred Stock and 1,639 shares of Series F Preferred Stock, which were cancelled during 2016.

On January 7, 2019, Group Inc. declared dividends of $234.38 per share of Series A Preferred Stock, $387.50 per share of Series B Preferred Stock, $250.00 per share of Series C Preferred Stock, $250.00 per share of Series D Preferred Stock, $343.75 per share of Series J Preferred Stock, $398.44 per share of Series K Preferred Stock and $393.75 per share of Series N Preferred Stock to be paid on February 11, 2019 to preferred shareholders of record on January 27, 2019. In addition, the firm declared dividends of $977.78 per each share of Series E Preferred Stock and Series F Preferred Stock, to be paid on March 1, 2019 to preferred shareholders of record on February 14, 2019.

Accumulated Other Comprehensive Income/(Loss)

The table below presents changes in the accumulated other comprehensive income/(loss), net of tax, by type.

$ in millions	Beginning balance	Other comprehensive income/(loss) adjustments, net of tax	Ending balance
Year Ended December 2018			
Currency translation	**$ (625)**	**$ 4**	**$ (621)**
Debt valuation adjustment	**(1,046)**	**2,553**	**1,507**
Pension and postretirement liabilities	**(200)**	**119**	**(81)**
Available-for-sale securities	**(9)**	**(103)**	**(112)**
Total	**$(1,880)**	**$2,573**	**$ 693**
Year Ended December 2017			
Currency translation	$ (647)	$ 22	$ (625)
Debt valuation adjustment	(239)	(807)	(1,046)
Pension and postretirement liabilities	(330)	130	(200)
Available-for-sale securities	–	(9)	(9)
Total	$(1,216)	$ (664)	$(1,880)
Year Ended December 2016			
Currency translation	$ (587)	$ (60)	$ (647)
Debt valuation adjustment	305	(544)	(239)
Pension and postretirement liabilities	(131)	(199)	(330)
Total	$ (413)	$ (803)	$(1,216)

Note 20.

Regulation and Capital Adequacy

The FRB is the primary regulator of Group Inc., a bank holding company (BHC) under the U.S. Bank Holding Company Act of 1956 and a financial holding company under amendments to this Act. As a BHC, the firm is subject to consolidated regulatory capital requirements which are calculated in accordance with the regulations of the FRB (Capital Framework).

The capital requirements are expressed as risk-based capital and leverage ratios that compare measures of regulatory capital to risk-weighted assets (RWAs), average assets and off-balance-sheet exposures. Failure to comply with these capital requirements could result in restrictions being imposed by the firm's regulators and could limit the firm's ability to distribute capital, including share repurchases and dividend payments, and to make certain discretionary compensation payments. The firm's capital levels are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. Furthermore, certain of the firm's subsidiaries are subject to separate regulations and capital requirements.

Capital Framework

The regulations under the Capital Framework are largely based on the Basel Committee on Banking Supervision's (Basel Committee) capital framework for strengthening international capital standards (Basel III) and also implement certain provisions of the Dodd-Frank Act. Under the Capital Framework, the firm is an "Advanced approach" banking organization and has been designated as a global systemically important bank (G-SIB).

The Capital Framework includes risk-based capital buffers which began to phase in ratably on January 1, 2016, and became fully effective on January 1, 2019. The risk-based capital buffers include the capital conservation buffer, G-SIB buffer and countercyclical capital buffer, if any, all of which must consist entirely of capital that qualifies as Common Equity Tier 1 (CET1). The G-SIB buffer is an extension of the capital conservation buffer, is updated annually based on financial data from the prior year and is generally applicable for the following year. The countercyclical capital buffer is also an extension of the capital conservation buffer and is intended to counteract systemic vulnerabilities. The Capital Framework also requires deductions from regulatory capital that phased in ratably per year from 2014 to 2018. In addition, junior subordinated debt issued to trusts will be fully phased out of regulatory capital by 2022.

The firm calculates its CET1, Tier 1 capital and Total capital ratios in accordance with (i) the Standardized approach and market risk rules set out in the Capital Framework (together, the Standardized Capital Rules) and (ii) the Advanced approach and market risk rules set out in the Capital Framework (together, the Basel III Advanced Rules). The lower of each risk-based capital ratio calculated in (i) and (ii) is the ratio against which the firm's compliance with its minimum risk-based ratio requirements is assessed. Under the Capital Framework, the firm is also subject to Tier 1 leverage requirements established by the FRB. The Capital Framework also introduced a supplementary leverage ratio (SLR) which became effective on January 1, 2018.

Consolidated Regulatory Risk-Based Capital and Leverage Ratios

The table below presents the minimum risk-based capital and leverage ratios.

	As of December	
	2018	2017
Risk-based capital ratios		
CET1 ratio	**8.3%**	7.0%
Tier 1 capital ratio	**9.8%**	8.5%
Total capital ratio	**11.8%**	10.5%
Leverage ratios		
Tier 1 leverage ratio	**4.0%**	4.0%
SLR	**5.0%**	N/A

The table below presents information about the risk-based capital ratios.

$ in millions	Standardized	Basel III Advanced
As of December 2018		
CET1	**$ 73,116**	**$ 73,116**
Tier 1 capital	**$ 83,702**	**$ 83,702**
Tier 2 capital	**$ 14,926**	**$ 13,743**
Total capital	**$ 98,628**	**$ 97,445**
RWAs	**$547,910**	**$558,111**
CET1 ratio	**13.3%**	**13.1%**
Tier 1 capital ratio	**15.3%**	**15.0%**
Total capital ratio	**18.0%**	**17.5%**
As of December 2017		
CET1	$ 67,110	$ 67,110
Tier 1 capital	$ 78,331	$ 78,331
Tier 2 capital	$ 14,977	$ 13,899
Total capital	$ 93,308	$ 92,230
RWAs	$555,611	$617,646
CET1 ratio	12.1%	10.9%
Tier 1 capital ratio	14.1%	12.7%
Total capital ratio	16.8%	14.9%

The table below presents information about the leverage ratios.

	For the Three Months Ended or as of December	
$ in millions	**2018**	2017
Tier 1 capital	**$ 83,702**	$ 78,331
Average total assets	**945,961**	937,424
Deductions from Tier 1 capital	**(4,754)**	(4,508)
Average adjusted total assets	**941,207**	932,916
Off-balance-sheet exposures	**401,699**	408,164
Total leverage exposure	**$1,342,906**	$1,341,080
Tier 1 leverage ratio	**8.9%**	8.4%
SLR	**6.2%**	5.8%

In the tables above:

- Each of the risk-based capital ratios calculated in accordance with the Basel III Advanced Rules was lower than that calculated in accordance with the Standardized Capital Rules and therefore the Basel III Advanced ratios were the ratios that applied to the firm as of both December 2018 and December 2017.
- Effective January 2018, the firm became subject to CET1 ratios calculated on a fully phased-in basis. As of December 2017, the firm's CET1 ratios calculated in accordance with the Standardized Capital Rules and Basel III Advanced Rules on a fully phased-in basis were 0.2 percentage points lower than on a transitional basis.
- Beginning in the fourth quarter of 2018, the firm's default experience was incorporated into the determination of probability of default for the calculation of Basel III Advanced RWAs. The impact of this change was an increase in the firm's Basel III Advanced CET1 ratio of approximately 0.8 percentage points.
- The minimum risk-based capital ratios as of December 2018 reflect (i) the 75% phase-in of the capital conservation buffer of 2.5%, (ii) the 75% phase-in of the G-SIB buffer of 2.5%, and (iii) the countercyclical capital buffer, which the FRB has set to zero.
- The minimum risk-based capital ratios as of December 2017 reflect (i) the 50% phase-in of the capital conservation buffer of 2.5%, (ii) the 50% phase-in of the G-SIB buffer of 2.5%, and (iii) the countercyclical capital buffer, which the FRB has set to zero.
- The minimum SLR as of December 2018 reflects the 2% buffer applicable to G-SIBs.
- Tier 1 capital and deductions from Tier 1 capital are calculated on a transitional basis as of December 2017.
- Average total assets represents the daily average assets for the quarter.
- Off-balance-sheet exposures represents the monthly average and consists of derivatives, securities financing transactions, commitments and guarantees.
- Tier 1 leverage ratio is calculated as Tier 1 capital divided by average adjusted total assets.
- SLR is calculated as Tier 1 capital divided by total leverage exposure.

Risk-based Capital. The table below presents information about risk-based capital.

	As of December	
$ in millions	**2018**	2017
Common shareholders' equity	**$78,982**	$70,390
Deduction for goodwill	**(3,097)**	(3,011)
Deduction for identifiable intangible assets	**(297)**	(258)
Other adjustments	**(2,472)**	(11)
CET1	**73,116**	67,110
Preferred stock	**11,203**	11,853
Deduction for investments in covered funds	**(615)**	(590)
Other adjustments	**(2)**	(42)
Tier 1 capital	**$83,702**	$78,331
Standardized Tier 2 and Total capital		
Tier 1 capital	**$83,702**	$78,331
Qualifying subordinated debt	**13,147**	13,360
Junior subordinated debt	**442**	567
Allowance for credit losses	**1,353**	1,078
Other adjustments	**(16)**	(28)
Standardized Tier 2 capital	**14,926**	14,977
Standardized Total capital	**$98,628**	$93,308
Basel III Advanced Tier 2 and Total capital		
Tier 1 capital	**$83,702**	$78,331
Standardized Tier 2 capital	**14,926**	14,977
Allowance for credit losses	**(1,353)**	(1,078)
Other adjustments	**170**	–
Basel III Advanced Tier 2 capital	**13,743**	13,899
Basel III Advanced Total capital	**$97,445**	$92,230

In the table above:

- Deduction for goodwill was net of deferred tax liabilities of $661 million as of December 2018 and $654 million as of December 2017.
- Deduction for identifiable intangible assets was net of deferred tax liabilities of $27 million as of December 2018 and $40 million as of December 2017. The deduction for identifiable intangible assets was fully phased into CET1 in January 2018. As of December 2017, CET1 reflects 80% of the identifiable intangible assets deduction and the remaining 20% was risk weighted.
- Deduction for investments in covered funds represents the firm's aggregate investments in applicable covered funds, excluding investments that are subject to an extended conformance period. See Note 6 for further information about the Volcker Rule.

- Other adjustments within CET1 and Tier 1 capital primarily include credit valuation adjustments on derivative liabilities, pension and postretirement liabilities, the overfunded portion of the firm's defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets, debt valuation adjustments and other required credit risk-based deductions. The deduction for such items was fully phased into CET1 in January 2018. As of December 2017, CET1 reflects 80% of such deduction. Substantially all of the balance that was not deducted from CET1 as of December 2017 was deducted from Tier 1 capital within other adjustments. Other adjustments within Basel III Advanced Tier 2 capital include eligible credit reserves.
- Qualifying subordinated debt is subordinated debt issued by Group Inc. with an original maturity of five years or greater. The outstanding amount of subordinated debt qualifying for Tier 2 capital is reduced upon reaching a remaining maturity of five years. See Note 16 for further information about the firm's subordinated debt.
- Junior subordinated debt represents debt issued to Trust. As of December 2018, 40% of this debt was included in Tier 2 capital and 60% was fully phased out of regulatory capital. As of December 2017, 50% of this debt was included in Tier 2 capital and 50% was fully phased out of regulatory capital. Junior subordinated debt is reduced by the amount of trust preferred securities purchased by the firm and will be fully phased out of Tier 2 capital by 2022 at a rate of 10% per year. See Note 16 for further information about the firm's junior subordinated debt and trust preferred securities purchased by the firm.

The tables below present changes in CET1, Tier 1 capital and Tier 2 capital.

	Year Ended December 2018	
$ in millions	**Standardized**	**Basel III Advanced**
CET1		
Beginning balance	**$67,110**	**$67,110**
Change in:		
Common shareholders' equity	**8,592**	**8,592**
Transitional provisions	**(117)**	**(117)**
Deduction for goodwill	**(86)**	**(86)**
Deduction for identifiable intangible assets	**26**	**26**
Other adjustments	**(2,409)**	**(2,409)**
Ending balance	**$73,116**	**$73,116**
Tier 1 capital		
Beginning balance	**$78,331**	**$78,331**
Change in:		
CET1	**6,006**	**6,006**
Transitional provisions	**13**	**13**
Deduction for investments in covered funds	**(25)**	**(25)**
Preferred stock	**(650)**	**(650)**
Other adjustments	**27**	**27**
Ending balance	**83,702**	**83,702**
Tier 2 capital		
Beginning balance	**14,977**	**13,899**
Change in:		
Qualifying subordinated debt	**(213)**	**(213)**
Junior subordinated debt	**(125)**	**(125)**
Allowance for credit losses	**275**	**–**
Other adjustments	**12**	**182**
Ending balance	**14,926**	**13,743**
Total capital	**$98,628**	**$97,445**

	Year Ended December 2017	
$ in millions	Standardized	Basel III Advanced
CET1		
Beginning balance	$72,046	$72,046
Change in:		
Common shareholders' equity	(5,300)	(5,300)
Transitional provisions	(426)	(426)
Deduction for goodwill	(348)	(348)
Deduction for identifiable intangible assets	24	24
Deduction for investments in financial institutions	586	586
Other adjustments	528	528
Ending balance	$67,110	$67,110
Tier 1 capital		
Beginning balance	$82,440	$82,440
Change in:		
CET1	(4,936)	(4,936)
Transitional provisions	152	152
Deduction for investments in covered funds	(145)	(145)
Preferred stock	650	650
Other adjustments	170	170
Ending balance	78,331	78,331
Tier 2 capital		
Beginning balance	16,074	15,352
Change in:		
Qualifying subordinated debt	(1,206)	(1,206)
Junior subordinated debt	(225)	(225)
Allowance for credit losses	356	–
Other adjustments	(22)	(22)
Ending balance	14,977	13,899
Total capital	$93,308	$92,230

In the tables above, the change in transitional provisions represents the increased phase-in of certain deductions and adjustments from 80% to 100% (effective January 1, 2018) for 2018 and from 60% to 80% (effective January 1, 2017) for 2017.

Risk-Weighted Assets. RWAs are calculated in accordance with both the Standardized Capital Rules and the Basel III Advanced Rules.

Credit Risk

Credit RWAs are calculated based upon measures of exposure, which are then risk weighted under the Standardized Capital Rules and Basel III Advanced Rules:

- The Standardized Capital Rules apply prescribed risk-weights, which depend largely on the type of counterparty. The exposure measure for derivatives and securities financing transactions are based on specific formulas which take certain factors into consideration.
- Under the Basel III Advanced Rules, the firm computes risk-weights for wholesale and retail credit exposures in accordance with the Advanced Internal Ratings-Based approach. The exposure measures for derivatives and securities financing transactions are computed utilizing internal models.
- For both Standardized and Basel III Advanced credit RWAs, the risk-weights for securitizations and equities are based on specific required formulaic approaches.

Market Risk

RWAs for market risk in accordance with the Standardized Capital Rules and the Basel III Advanced Rules are generally consistent. Market RWAs are calculated based on measures of exposure which include Value-at-Risk (VaR), stressed VaR, incremental risk and comprehensive risk based on internal models, and a standardized measurement method for specific risk.

- VaR is the potential loss in value of inventory positions, as well as certain other financial assets and financial liabilities, due to adverse market movements over a defined time horizon with a specified confidence level.

  For both risk management purposes and regulatory capital calculations the firm uses a single VaR model which captures risks including those related to interest rates, equity prices, currency rates and commodity prices. However, VaR used for regulatory capital requirements (regulatory VaR) differs from risk management VaR due to different time horizons and confidence levels (10-day and 99% for regulatory VaR vs. one-day and 95% for risk management VaR), as well as differences in the scope of positions on which VaR is calculated. In addition, the daily net revenues used to determine risk management VaR exceptions (i.e., comparing the daily net revenues to the VaR measure calculated as of the end of the prior business day) include intraday activity, whereas the FRB's regulatory capital rules require that intraday activity be excluded from daily net revenues when calculating regulatory VaR exceptions. Intraday activity includes bid/offer net revenues, which are more likely than not to be positive by their nature.

  As a result, there may be differences in the number of VaR exceptions and the amount of daily net revenues calculated for regulatory VaR compared to the amounts calculated for risk management VaR. The firm's positional losses observed on a single day exceeded its 99% one-day regulatory VaR on two occasions during 2018 and did not exceed its 99% one-day regulatory VaR during 2017. There was no change in the VaR multiplier used to calculate Market RWAs;
- Stressed VaR is the potential loss in value of inventory positions, as well as certain other financial assets and financial liabilities, during a period of significant market stress;
- Incremental risk is the potential loss in value of non-securitized inventory positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon;
- Comprehensive risk is the potential loss in value, due to price risk and defaults, within the firm's credit correlation positions; and
- Specific risk is the risk of loss on a position that could result from factors other than broad market movements, including event risk, default risk and idiosyncratic risk. The standardized measurement method is used to determine specific risk RWAs, by applying supervisory defined risk-weighting factors after applicable netting is performed.

Operational Risk

Operational RWAs are only required to be included under the Basel III Advanced Rules. The firm utilizes an internal risk-based model to quantify Operational RWAs.

The tables below present information about RWAs.

	Standardized Capital Rules as of December	
$ in millions	**2018**	2017
Credit RWAs		
Derivatives	**$122,511**	$126,076
Commitments, guarantees and loans	**160,305**	145,104
Securities financing transactions	**66,363**	77,962
Equity investments	**53,563**	48,155
Other	**70,596**	70,933
Total Credit RWAs	**473,338**	468,230
Market RWAs		
Regulatory VaR	**7,782**	7,532
Stressed VaR	**27,952**	32,753
Incremental risk	**10,469**	8,441
Comprehensive risk	**2,770**	2,397
Specific risk	**25,599**	36,258
Total Market RWAs	**74,572**	87,381
Total RWAs	**$547,910**	$555,611

	Basel III Advanced Rules as of December	
$ in millions	**2018**	2017
Credit RWAs		
Derivatives	**$ 82,301**	$102,986
Commitments, guarantees and loans	**143,356**	163,375
Securities financing transactions	**18,259**	19,362
Equity investments	**55,154**	51,626
Other	**69,681**	75,968
Total Credit RWAs	**368,751**	413,317
Market RWAs		
Regulatory VaR	**7,782**	7,532
Stressed VaR	**27,952**	32,753
Incremental risk	**10,469**	8,441
Comprehensive risk	**2,770**	1,870
Specific risk	**25,599**	36,258
Total Market RWAs	**74,572**	86,854
Total Operational RWAs	**114,788**	117,475
Total RWAs	**$558,111**	$617,646

In the tables above:

- Securities financing transactions represent resale and repurchase agreements and securities borrowed and loaned transactions.
- Other includes receivables, certain debt securities, cash and cash equivalents and other assets.

The tables below present changes in RWAs.

	Year Ended December 2018	
$ in millions	**Standardized**	**Basel III Advanced**
Risk-Weighted Assets		
Beginning balance	**$555,611**	**$617,646**
Credit RWAs		
Change in:		
Transitional provisions	**7,766**	**8,232**
Derivatives	**(3,565)**	**(20,685)**
Commitments, guarantees and loans	**15,201**	**(20,019)**
Securities financing transactions	**(11,599)**	**(1,103)**
Equity investments	**(2,241)**	**(4,580)**
Other	**(454)**	**(6,411)**
Change in Credit RWAs	**5,108**	**(44,566)**
Market RWAs		
Change in:		
Regulatory VaR	**250**	**250**
Stressed VaR	**(4,801)**	**(4,801)**
Incremental risk	**2,028**	**2,028**
Comprehensive risk	**373**	**900**
Specific risk	**(10,659)**	**(10,659)**
Change in Market RWAs	**(12,809)**	**(12,282)**
Operational RWAs		
Change in operational risk	**–**	**(2,687)**
Change in Operational RWAs	**–**	**(2,687)**
Ending balance	**$547,910**	**$558,111**

	Year Ended December 2017	
$ in millions	Standardized	Basel III Advanced
Risk-Weighted Assets		
Beginning balance	$496,676	$549,650
Credit RWAs		
Change in:		
Transitional provisions	(233)	(233)
Derivatives	1,790	(2,110)
Commitments, guarantees and loans	29,360	40,583
Securities financing transactions	6,643	4,689
Equity investments	6,889	7,693
Other	12,368	12,608
Change in Credit RWAs	56,817	63,230
Market RWAs		
Change in:		
Regulatory VaR	(2,218)	(2,218)
Stressed VaR	10,278	10,278
Incremental risk	566	566
Comprehensive risk	(2,941)	(2,680)
Specific risk	(3,567)	(3,567)
Change in Market RWAs	2,118	2,379
Operational RWAs		
Change in operational risk	–	2,387
Change in Operational RWAs	–	2,387
Ending balance	$555,611	$617,646

RWAs Rollforward Commentary

Year Ended December 2018. Standardized Credit RWAs as of December 2018 increased by $5.11 billion compared with December 2017, primarily reflecting an increase in commitments, guarantees and loans, principally due to an increase in lending activity. This increase was partially offset by a decrease in securities financing transactions, principally due to reduced exposures. Standardized Market RWAs as of December 2018 decreased by $12.81 billion compared with December 2017, primarily reflecting a decrease in specific risk on positions for which the firm obtained increased transparency into the underliers and as a result utilized a modeled approach to calculate RWAs.

Basel III Advanced Credit RWAs as of December 2018 decreased by $44.57 billion compared with December 2017. Beginning in the fourth quarter of 2018, the firm's default experience was incorporated into the determination of probability of default, which resulted in a decrease in Credit RWAs, primarily in commitments, guarantees and loans and derivatives. Basel III Advanced Market RWAs as of December 2018 decreased by $12.28 billion compared with December 2017, primarily reflecting a decrease in specific risk on positions for which the firm obtained increased transparency into the underliers and as a result utilized a modeled approach to calculate RWAs.

Year Ended December 2017. Standardized Credit RWAs as of December 2017 increased by $56.82 billion compared with December 2016, primarily reflecting an increase in commitments, guarantees and loans, principally due to increased lending activity. Standardized Market RWAs as of December 2017 increased by $2.12 billion compared with December 2016, primarily reflecting an increase in stressed VaR as a result of increased risk exposures partially offset by decreases in specific risk, as a result of changes in risk exposures, and comprehensive risk, as a result of changes in risk measurements.

Basel III Advanced Credit RWAs as of December 2017 increased by $63.23 billion compared with December 2016, primarily reflecting an increase in commitments, guarantees and loans, principally due to increased lending activity. Basel III Advanced Market RWAs as of December 2017 increased by $2.38 billion compared with December 2016, primarily reflecting an increase in stressed VaR as a result of increased risk exposures partially offset by decreases in specific risk, as a result of changes in risk exposures, and comprehensive risk, as a result of changes in risk measurements.

Bank Subsidiaries

Regulatory Capital Ratios. GS Bank USA, an FDIC-insured, New York State-chartered bank and a member of the Federal Reserve System, is supervised and regulated by the FRB, the FDIC, the New York State Department of Financial Services and the Bureau of Consumer Financial Protection, and is subject to regulatory capital requirements that are calculated in substantially the same manner as those applicable to BHCs. For purposes of assessing the adequacy of its capital, GS Bank USA calculates its capital ratios in accordance with the regulatory capital requirements applicable to state member banks. Those requirements are based on the Capital Framework described above. GS Bank USA is an Advanced approach banking organization under the Capital Framework.

Under the regulatory framework for prompt corrective action applicable to GS Bank USA, in order to meet the quantitative requirements for being a "well-capitalized" depository institution, GS Bank USA must meet higher minimum requirements than the minimum ratios in the table below. In order to be considered a "well-capitalized" depository institution, GS Bank USA must meet the SLR requirement of 6.0% or greater, which became effective on January 1, 2018.

GS Bank USA's capital levels and prompt corrective action classification are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. Failure to comply with these capital requirements, including a breach of the buffers described above, could result in restrictions being imposed by GS Bank USA's regulators.

Similar to the firm, GS Bank USA is required to calculate each of the CET1, Tier 1 capital and Total capital ratios in accordance with both the Standardized Capital Rules and Basel III Advanced Rules. The lower of each risk-based capital ratio calculated in accordance with the Standardized Capital Rules and Basel III Advanced Rules is the ratio against which GS Bank USA's compliance with its minimum ratio requirements is assessed.

The table below presents GS Bank USA's minimum risk-based capital and leverage ratios and "well-capitalized" minimum ratios.

	Minimum Ratio as of December		"Well-capitalized"
	2018	2017	**Minimum Ratio**
Risk-based capital ratios			
CET1 ratio	**6.4%**	5.8%	**6.5%**
Tier 1 capital ratio	**7.9%**	7.3%	**8.0%**
Total capital ratio	**9.9%**	9.3%	**10.0%**
Leverage ratios			
Tier 1 leverage ratio	**4.0%**	4.0%	**5.0%**
SLR	**3.0%**	N/A	**6.0%**

The table below presents information about GS Bank USA's risk-based capital ratios.

$ in millions	Standardized	Basel III Advanced
As of December 2018		
CET1	**$ 27,467**	**$ 27,467**
Tier 1 capital	**$ 27,467**	**$ 27,467**
Tier 2 capital	**$ 5,069**	**$ 4,446**
Total capital	**$ 32,536**	**$ 31,913**
RWAs	**$248,356**	**$149,019**
CET1 ratio	**11.1%**	**18.4%**
Tier 1 capital ratio	**11.1%**	**18.4%**
Total capital ratio	**13.1%**	**21.4%**
As of December 2017		
CET1	$ 25,343	$ 25,343
Tier 1 capital	$ 25,343	$ 25,343
Tier 2 capital	$ 2,547	$ 2,000
Total capital	$ 27,890	$ 27,343
RWAs	$229,775	$164,602
CET1 ratio	11.0%	15.4%
Tier 1 capital ratio	11.0%	15.4%
Total capital ratio	12.1%	16.6%

The table below presents information about GS Bank USA's leverage ratios.

	For the Three Months Ended or as of December	
$ in millions	**2018**	2017
Tier 1 capital	**$ 27,467**	$ 25,343
Average adjusted total assets	**$188,606**	$168,842
Total leverage exposure	**$368,062**	$345,734
Tier 1 leverage ratio	**14.6%**	15.0%
SLR	**7.5%**	7.3%

In the tables above:

- Each of the risk-based capital ratios calculated in accordance with the Standardized Capital Rules was lower than that calculated in accordance with the Basel III Advanced Rules and therefore the Standardized Capital ratios were the ratios that applied to GS Bank USA as of both December 2018 and December 2017.
- The minimum risk-based capital ratios as of December 2018 reflect (i) the 75% phase-in of the capital conservation buffer of 2.5% and (ii) the countercyclical capital buffer of zero percent.
- The minimum risk-based capital ratios as of December 2017 reflect (i) the 50% phase-in of the capital conservation buffer of 2.5% and (ii) the countercyclical capital buffer of zero percent.
- Beginning in the fourth quarter of 2018, the firm's default experience was incorporated into the determination of probability of default for the calculation of Basel III Advanced RWAs. The impact of this change was an increase in GS Bank USA's Basel III Advanced CET1 ratio of approximately 1.6 percentage points.
- The Standardized CET1 ratio and Tier 1 capital ratio both remained essentially unchanged from December 2017 to December 2018.
- The Standardized Total capital ratio increased from December 2017 to December 2018 primarily due to an increase in Total capital, principally due to the issuance of subordinated debt.
- The Basel III Advanced CET1 ratio, Tier 1 capital ratio and Total capital ratio increased from December 2017 to December 2018. Beginning in the fourth quarter of 2018, the firm's default experience was incorporated into the determination of probability of default, which resulted in a decrease in Credit RWAs, primarily in commitments, guarantees and loans and derivatives.
- Tier 1 capital and deductions from Tier 1 capital are calculated on a transitional basis as of December 2017.
- Tier 1 leverage ratio is calculated as Tier 1 capital divided by average adjusted total assets.
- SLR is calculated as Tier 1 capital divided by total leverage exposure.

The firm's principal non-U.S. bank subsidiary, GSIB, is a wholly-owned credit institution, regulated by the Prudential Regulation Authority and the Financial Conduct Authority and is subject to minimum capital requirements. As of both December 2018 and December 2017, GSIB was in compliance with all regulatory capital requirements.

Other. The deposits of GS Bank USA are insured by the FDIC to the extent provided by law. The FRB requires that GS Bank USA maintain cash reserves with the Federal Reserve Bank of New York. The amount deposited by GS Bank USA at the Federal Reserve Bank of New York was $29.20 billion as of December 2018 and $50.86 billion as of December 2017, which exceeded required reserve amounts by $29.03 billion as of December 2018 and $50.74 billion as of December 2017.

Restrictions on Payments

Group Inc. may be limited in its ability to access capital held at certain subsidiaries as a result of regulatory, tax or other constraints. These limitations include provisions of applicable law and regulations and other regulatory restrictions that limit the ability of those subsidiaries to declare and pay dividends without prior regulatory approval (e.g., dividends that may be paid by GS Bank USA are limited to the lesser of the amounts calculated under a recent earnings test and an undivided profits test) even if the relevant subsidiary would satisfy the equity capital requirements applicable to it after giving effect to the dividend. For example, the FRB, the FDIC and the New York State Department of Financial Services have authority to prohibit or to limit the payment of dividends by the banking organizations they supervise (including GS Bank USA) if, in the regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in the light of the financial condition of the banking organization.

In addition, subsidiaries not subject to separate regulatory capital requirements may hold capital to satisfy local tax and legal guidelines, rating agency requirements (for entities with assigned credit ratings) or internal policies, including policies concerning the minimum amount of capital a subsidiary should hold based on its underlying level of risk.

Group Inc.'s equity investment in subsidiaries was $90.22 billion as of December 2018 and $93.88 billion as of December 2017, of which Group Inc. was required to maintain $52.92 billion as of December 2018 and $53.02 billion as of December 2017, of minimum equity capital in its regulated subsidiaries in order to satisfy the regulatory requirements of such subsidiaries.

Group Inc.'s capital invested in certain non-U.S. subsidiaries is exposed to foreign exchange risk, substantially all of which is managed through a combination of derivatives and non-U.S. denominated debt. See Note 7 for information about the firm's net investment hedges used to hedge this risk.

Note 21.

Earnings Per Common Share

Basic earnings per common share (EPS) is calculated by dividing net earnings applicable to common shareholders by the weighted average number of common shares outstanding and restricted stock units (RSUs) for which no future service is required as a condition to the delivery of the underlying common stock (collectively, basic shares). Diluted EPS includes the determinants of basic EPS and, in addition, reflects the dilutive effect of the common stock deliverable for stock options and for RSUs for which future service is required as a condition to the delivery of the underlying common stock.

The table below presents information about basic and diluted EPS.

	Year Ended December		
in millions, except per share amounts	**2018**	2017	2016
Net earnings applicable to common shareholders	**$9,860**	$3,685	$7,087
Weighted average basic shares	**385.4**	401.6	427.4
Effect of dilutive securities:			
RSUs	**3.9**	5.3	4.7
Stock options	**0.9**	2.2	3.0
Dilutive securities	**4.8**	7.5	7.7
Weighted average basic shares and dilutive securities	**390.2**	409.1	435.1
Basic EPS	**$25.53**	$ 9.12	$16.53
Diluted EPS	**$25.27**	$ 9.01	$16.29

In the table above:

- Unvested share-based awards that have non-forfeitable rights to dividends or dividend equivalents are treated as a separate class of securities in calculating EPS. The impact of applying this methodology was a reduction in basic EPS of $0.05 for 2018, $0.06 for 2017 and $0.05 for 2016.
- Diluted EPS does not include antidilutive securities (RSUs and common shares underlying stock options) of less than 0.1 million for 2018, 0.1 million for 2017 and 2.8 million for 2016.

Note 22.

Transactions with Affiliated Funds

The firm has formed numerous nonconsolidated investment funds with third-party investors. As the firm generally acts as the investment manager for these funds, it is entitled to receive management fees and, in certain cases, advisory fees or incentive fees from these funds. Additionally, the firm invests alongside the third-party investors in certain funds.

The tables below present fees earned from affiliated funds, fees receivable from affiliated funds and the aggregate carrying value of the firm's interests in affiliated funds.

	Year Ended December		
$ in millions	**2018**	2017	2016
Fees earned from funds	**$3,571**	$2,932	$2,777

	As of December	
$ in millions	**2018**	2017
Fees receivable from funds	**$ 610**	$ 637
Aggregate carrying value of interests in funds	**$4,994**	$4,993

The firm may periodically determine to waive certain management fees on selected money market funds. Management fees waived were $51 million for 2018 and $98 million for 2017.

The Volcker Rule restricts the firm from providing financial support to covered funds (as defined in the rule) after the expiration of the conformance period. As a general matter, in the ordinary course of business, the firm does not expect to provide additional voluntary financial support to any covered funds but may choose to do so with respect to funds that are not subject to the Volcker Rule; however, in the event that such support is provided, the amount is not expected to be material.

The firm had an outstanding guarantee, as permitted under the Volcker Rule, on behalf of its funds of $154 million as of both December 2018 and December 2017. The firm has voluntarily provided this guarantee in connection with a financing agreement with a third-party lender executed by one of the firm's real estate funds that is not covered by the Volcker Rule. As of both December 2018 and December 2017, except as noted above, the firm has not provided any additional financial support to its affiliated funds.

In addition, in the ordinary course of business, the firm may also engage in other activities with its affiliated funds including, among others, securities lending, trade execution, market-making, custody, and acquisition and bridge financing. See Note 18 for the firm's investment commitments related to these funds.

Note 23.

Interest Income and Interest Expense

Interest is recorded over the life of the instrument on an accrual basis based on contractual interest rates.

The table below presents sources of interest income and interest expense.

	Year Ended December		
$ in millions	**2018**	2017	2016
Interest income			
Deposits with banks	**$ 1,418**	$ 819	$ 452
Collateralized agreements	**3,852**	1,661	691
Financial instruments owned	**6,894**	5,904	5,444
Loans receivable	**4,148**	2,678	1,843
Other interest	**3,367**	2,051	1,261
Total interest income	**19,679**	13,113	9,691
Interest expense			
Deposits	**2,606**	1,380	878
Collateralized financings	**2,051**	863	442
Financial instruments sold, but not yet purchased	**1,554**	1,388	1,251
Secured and unsecured borrowings:			
Short-term	**695**	698	446
Long-term	**5,555**	4,599	4,242
Other interest	**3,451**	1,253	(155)
Total interest expense	**15,912**	10,181	7,104
Net interest income	**$ 3,767**	$ 2,932	$2,587

In the table above:

- Collateralized agreements includes rebates paid and interest income on securities borrowed.
- Other interest income includes interest income on customer debit balances and other interest-earning assets.
- Collateralized financings consists of repurchase agreements and securities loaned.
- Other interest expense includes rebates received on other interest-bearing liabilities and interest expense on customer credit balances.

Note 24.

Income Taxes

Tax Legislation

The provision for taxes for 2017 reflected an estimated impact of Tax Legislation of $4.40 billion. The $4.40 billion income tax expense included the repatriation tax on undistributed earnings of foreign subsidiaries, the effects of the implementation of a territorial tax system, and the remeasurement of U.S. deferred tax assets at lower enacted tax rates. During 2018, the firm finalized this estimate to reflect the impact of updated information, including subsequent guidance issued by the U.S. Internal Revenue Service (IRS), resulting in a $487 million income tax benefit.

Provision for Income Taxes

Income taxes are provided for using the asset and liability method under which deferred tax assets and liabilities are recognized for temporary differences between the financial reporting and tax bases of assets and liabilities. The firm reports interest expense related to income tax matters in provision for taxes and income tax penalties in other expenses.

The table below presents information about the provision for taxes.

	Year Ended December		
$ in millions	**2018**	2017	2016
Current taxes			
U.S. federal	**$ 2,986**	$ 320	$1,032
State and local	**379**	64	139
Non-U.S.	**1,302**	1,004	1,184
Total current tax expense	**4,667**	1,388	2,355
Deferred taxes			
U.S. federal	**(2,711)**	5,083	399
State and local	**58**	157	51
Non-U.S.	**8**	218	101
Total deferred tax (benefit)/expense	**(2,645)**	5,458	551
Provision for taxes	**$ 2,022**	$6,846	$2,906

In the table above:

- State and local current taxes in 2017 and 2016 includes the impact of settlements of state and local examinations.
- U.S. federal current tax expense and U.S. federal deferred tax expense in 2018 and 2017 includes the impact of Tax Legislation.

The table below presents a reconciliation of the U.S. federal statutory income tax rate to the effective income tax rate.

	Year Ended December		
	2018	2017	2016
U.S. federal statutory income tax rate	**21.0%**	35.0%	35.0%
State and local taxes, net of U.S. federal income tax effects	**2.0**	1.5	0.9
ASU No. 2016-09 Tax benefits on settlement of employee share-based awards	**(2.2)**	(6.4)	–
Non-U.S. operations	**(0.7)**	(6.3)	(6.7)
Tax credits	**(1.4)**	(2.1)	(2.0)
Tax-exempt income, including dividends	**(0.6)**	(0.2)	(0.3)
Tax Legislation	**(3.9)**	39.5	–
Non-deductible legal expenses	**1.2**	0.5	1.0
Other	**0.8**	–	0.3
Effective income tax rate	**16.2%**	61.5%	28.2%

In the table above:

- Non-U.S. operations in 2018 includes the impact of the Base Erosion and Anti-Abuse Tax and Global Intangible Low Taxed Income (GILTI).
- Non-U.S. operations in 2017 and 2016 includes the impact of permanently reinvested earnings and excludes the estimated impact of Tax Legislation.
- State and local taxes in 2017 and 2016, net of U.S. federal income tax effects, includes the impact of settlements of state and local examinations.

Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities. These temporary differences result in taxable or deductible amounts in future years and are measured using the tax rates and laws that will be in effect when such differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets to the amount that more likely than not will be realized and primarily relate to the ability to utilize losses in various tax jurisdictions. Tax assets are included in other assets and tax liabilities are included in other liabilities.

The table below presents information about deferred tax assets and liabilities, excluding the impact of netting within tax jurisdictions.

	As of December	
$ in millions	**2018**	2017
Deferred tax assets		
Compensation and benefits	**$1,296**	$1,233
ASC 740 asset related to unrecognized tax benefits	**152**	75
Non-U.S. operations	**264**	–
Net operating losses	**688**	428
Occupancy-related	**71**	67
Other comprehensive income-related	**–**	408
Tax credits carryforward	**62**	1,006
Other, net	**434**	113
Subtotal	**2,967**	3,330
Valuation allowance	**(245)**	(156)
Total deferred tax assets	**$2,722**	$3,174
Deferred tax liabilities		
Depreciation and amortization	**$ 996**	$ 826
Tax Legislation — repatriation tax	**–**	3,114
Non-U.S. operations	**–**	180
Unrealized gains	**1,290**	742
Other comprehensive income-related	**84**	–
Total deferred tax liabilities	**$2,370**	$4,862

The firm has recorded deferred tax assets of $688 million as of December 2018 and $428 million as of December 2017, in connection with U.S. federal, state and local and foreign net operating loss carryforwards. The firm also recorded a valuation allowance of $81 million as of December 2018 and $128 million as of December 2017, related to these net operating loss carryforwards.

As of December 2018, the U.S. federal net operating loss carryforward was $259 million, the state and local net operating loss carryforward was $1.35 billion, and the foreign net operating loss carryforward was $2.39 billion. If not utilized, the U.S. federal, state and local, and foreign net operating loss carryforwards will begin to expire in 2019. If these carryforwards expire, they will not have a material impact on the firm's results of operations. As of December 2018, the firm has recorded deferred tax assets of $24 million in connection with foreign tax credit carryforwards and a valuation allowance of $24 million related to these foreign tax credit carryforwards. As of December 2018, the firm has recorded deferred tax assets of $38 million in connection with state and local tax credit carryforwards. If not utilized, the foreign tax credit carryforward will expire in 2028 and the state and local tax credit carryforward will begin to expire in 2020. As of December 2018, the firm did not have any general business credit carryforwards.

As of both December 2018 and December 2017, the firm had no U.S. capital loss carryforwards and no related net deferred income tax assets. As of December 2018, the firm had deferred tax assets of $77 million in connection with foreign capital loss carryforwards and a valuation allowance of $77 million related to these capital loss carryforwards. As of December 2017, there were no foreign capital loss carryforwards.

The valuation allowance increased by $89 million during 2018 and increased by $41 million during 2017. The increases in both 2018 and 2017 were primarily due to an increase in deferred tax assets from which the firm does not expect to realize any benefit.

The firm permanently reinvested eligible earnings of certain foreign subsidiaries. As of December 2018, all U.S. taxes were accrued on these subsidiaries' distributable earnings, substantially all of which resulted from the Tax Legislation repatriation tax and GILTI. As of December 2017, substantially all U.S. taxes were accrued on these subsidiaries' earnings and profits as a result of the Tax Legislation repatriation tax.

Unrecognized Tax Benefits

The firm recognizes tax positions in the consolidated financial statements only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. A position that meets this standard is measured at the largest amount of benefit that will more likely than not be realized on settlement. A liability is established for differences between positions taken in a tax return and amounts recognized in the consolidated financial statements.

The accrued liability for interest expense related to income tax matters and income tax penalties was $107 million as of December 2018 and $81 million as of December 2017. The firm recognized interest expense and income tax penalties of $18 million for 2018, $63 million for 2017 and $27 million for 2016. It is reasonably possible that unrecognized tax benefits could change significantly during the twelve months subsequent to December 2018 due to potential audit settlements. However, at this time it is not possible to estimate any potential change.

The table below presents the changes in the liability for unrecognized tax benefits, which is included in other liabilities.

	Year Ended or as of December		
$ in millions	**2018**	2017	2016
Beginning balance	**$ 665**	$ 852	$ 825
Increases based on tax positions related to the current year	**197**	94	113
Increases based on tax positions related to prior years	**232**	101	188
Decreases based on tax positions related to prior years	**(39)**	(128)	(88)
Decreases related to settlements	**(3)**	(255)	(186)
Exchange rate fluctuations	**(1)**	1	–
Ending balance	**$1,051**	$ 665	$ 852
Related deferred income tax asset	**152**	75	231
Net unrecognized tax benefit	**$ 899**	$ 590	$ 621

Regulatory Tax Examinations

The firm is subject to examination by the IRS and other taxing authorities in jurisdictions where the firm has significant business operations, such as the United Kingdom, Japan, Hong Kong and various states, such as New York. The tax years under examination vary by jurisdiction. The firm does not expect completion of these audits to have a material impact on the firm's financial condition but it may be material to operating results for a particular period, depending, in part, on the operating results for that period.

The table below presents the earliest tax years that remain subject to examination by major jurisdiction.

Jurisdiction	As of December 2018
U.S. Federal	**2011**
New York State and City	**2011**
United Kingdom	**2014**
Japan	**2014**
Hong Kong	**2011**

U.S. Federal examinations of 2011 and 2012 began in 2013. The firm has been accepted into the Compliance Assurance Process program by the IRS for each of the tax years from 2013 through 2019. This program allows the firm to work with the IRS to identify and resolve potential U.S. Federal tax issues before the filing of tax returns. The 2013 through 2017 tax years remain subject to post-filing review.

New York State and City examinations (excluding GS Bank USA) of 2011 through 2014 began in 2017. New York State and City examinations for GS Bank USA have been completed through 2014.

All years including and subsequent to the years in the table above remain open to examination by the taxing authorities. The firm believes that the liability for unrecognized tax benefits it has established is adequate in relation to the potential for additional assessments.

Note 25.

Business Segments

The firm reports its activities in the following four business segments: Investment Banking, Institutional Client Services, Investing & Lending and Investment Management.

Basis of Presentation

In reporting segments, certain of the firm's business lines have been aggregated where they have similar economic characteristics and are similar in each of the following areas: (i) the nature of the services they provide, (ii) their methods of distribution, (iii) the types of clients they serve and (iv) the regulatory environments in which they operate.

The cost drivers of the firm taken as a whole, compensation, headcount and levels of business activity, are broadly similar in each of the firm's business segments. Compensation and benefits expenses in the firm's segments reflect, among other factors, the overall performance of the firm, as well as the performance of individual businesses. Consequently, pre-tax margins in one segment of the firm's business may be significantly affected by the performance of the firm's other business segments.

The firm allocates assets (including allocations of global core liquid assets and cash, secured client financing and other assets), revenues and expenses among the four business segments. Due to the integrated nature of these segments, estimates and judgments are made in allocating certain assets, revenues and expenses. The allocation process is based on the manner in which management currently views the performance of the segments.

Management believes that this allocation provides a reasonable representation of each segment's contribution to consolidated pre-tax earnings and total assets. Transactions between segments are based on specific criteria or approximate third-party rates.

The table below presents net revenues, provision for credit losses, operating expenses and pre-tax earnings by segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
Investment Banking			
Financial Advisory	**$ 3,507**	$ 3,188	$ 2,932
Equity underwriting	**1,646**	1,243	891
Debt underwriting	**2,709**	2,940	2,450
Total Underwriting	**4,355**	4,183	3,341
Total net revenues	**7,862**	7,371	6,273
Operating expenses	**4,346**	3,526	3,437
Pre-tax earnings	**$ 3,516**	$ 3,845	$ 2,836
Institutional Client Services			
FICC Client Execution	**$ 5,882**	$ 5,299	$ 7,556
Equities client execution	**2,835**	2,046	2,194
Commissions and fees	**3,055**	2,920	3,078
Securities services	**1,710**	1,637	1,639
Total Equities	**7,600**	6,603	6,911
Total net revenues	**13,482**	11,902	14,467
Operating expenses	**10,351**	9,692	9,713
Pre-tax earnings	**$ 3,131**	$ 2,210	$ 4,754
Investing & Lending			
Equity securities	**$ 4,455**	$ 4,578	$ 2,573
Debt securities and loans	**3,795**	2,660	1,689
Total net revenues	**8,250**	7,238	4,262
Provision for credit losses	**674**	657	182
Operating expenses	**3,365**	2,796	2,386
Pre-tax earnings	**$ 4,211**	$ 3,785	$ 1,694
Investment Management			
Management and other fees	**$ 5,438**	$ 5,144	$ 4,798
Incentive fees	**830**	417	421
Transaction revenues	**754**	658	569
Total net revenues	**7,022**	6,219	5,788
Operating expenses	**5,267**	4,800	4,654
Pre-tax earnings	**$ 1,755**	$ 1,419	$ 1,134
Total net revenues	**$36,616**	$32,730	$30,790
Provision for credit losses	**674**	657	182
Total operating expenses	**23,461**	20,941	20,304
Total pre-tax earnings	**$12,481**	$11,132	$10,304

In the table above:

- Revenues and expenses directly associated with each segment are included in determining pre-tax earnings.
- Net revenues in the firm's segments include allocations of interest income and expense to specific securities, commodities and other positions in relation to the cash generated by, or funding requirements of, such positions. Net interest is included in segment net revenues as it is consistent with how management assesses segment performance.
- Overhead expenses not directly allocable to specific segments are allocated ratably based on direct segment expenses.
- Provision for credit losses, previously reported in Investing & Lending segment net revenues, is now reported as a separate line item in the consolidated statements of earnings. Previously reported amounts have been conformed to the current presentation.
- All operating expenses have been allocated to the firm's segments except for charitable contributions of $132 million for 2018, $127 million for 2017 and $114 million for 2016.
- Total operating expenses included net provisions for litigation and regulatory proceedings of $844 million for 2018, $188 million for 2017 and $396 million for 2016.

The table below presents assets by segment.

	As of December	
$ in millions	**2018**	2017
Investment Banking	**$ 1,748**	$ 2,202
Institutional Client Services	**656,920**	675,255
Investing & Lending	**259,104**	226,016
Investment Management	**14,024**	13,303
Total assets	**$931,796**	$916,776

The table below presents net interest income by segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
Investment Banking	**$ –**	$ –	$ –
Institutional Client Services	**976**	1,322	1,456
Investing & Lending	**2,427**	1,325	880
Investment Management	**364**	285	251
Total net interest income	**$3,767**	$2,932	$2,587

The table below presents depreciation and amortization expense by segment.

	Year Ended December		
$ in millions	**2018**	2017	2016
Investment Banking	**$ 114**	$ 124	$126
Institutional Client Services	**567**	514	489
Investing & Lending	**426**	314	215
Investment Management	**221**	200	168
Total depreciation and amortization	**$1,328**	$1,152	$998

Geographic Information

Due to the highly integrated nature of international financial markets, the firm manages its businesses based on the profitability of the enterprise as a whole. The methodology for allocating profitability to geographic regions is dependent on estimates and management judgment because a significant portion of the firm's activities require cross-border coordination in order to facilitate the needs of the firm's clients.

Geographic results are generally allocated as follows:

- Investment Banking: location of the client and investment banking team.
- Institutional Client Services: FICC Client Execution and Equities (excluding Securities services): location of the market-making desk; Securities services: location of the primary market for the underlying security.
- Investing & Lending: Investing: location of the investment; Lending: location of the client.
- Investment Management: location of the sales team.

The table below presents total net revenues, pre-tax earnings and net earnings (excluding Corporate) by geographic region allocated based on the methodology referred to above.

	Year Ended December					
$ in millions	**2018**		2017		2016	
Net revenues						
Americas	**$22,339**	**61%**	$19,737	60%	$18,301	60%
Europe, Middle East and Africa	**9,244**	**25%**	8,168	25%	8,065	26%
Asia	**5,033**	**14%**	4,825	15%	4,424	14%
Total net revenues	**$36,616**	**100%**	$32,730	100%	$30,790	100%
Pre-tax earnings						
Americas	**$ 8,235**	**65%**	$ 7,119	63%	$ 6,352	61%
Europe, Middle East and Africa	**3,266**	**26%**	2,583	23%	2,883	28%
Asia	**1,112**	**9%**	1,557	14%	1,183	11%
Subtotal	**12,613**	**100%**	11,259	100%	10,418	100%
Corporate	**(132)**		(127)		(114)	
Total pre-tax earnings	**$12,481**		$11,132		$10,304	
Net earnings						
Americas	**$ 6,960**	**66%**	$ 997	23%	$ 4,337	58%
Europe, Middle East and Africa	**2,636**	**25%**	2,144	49%	2,270	30%
Asia	**966**	**9%**	1,241	28%	870	12%
Subtotal	**10,562**	**100%**	4,382	100%	7,477	100%
Corporate	**(103)**		(96)		(79)	
Total net earnings	**$10,459**		$ 4,286		$ 7,398	

In the table above:

- Americas net earnings included an income tax benefit of $487 million in 2018 and estimated income tax expense of $4.40 billion in 2017 related to Tax Legislation.
- Corporate pre-tax earnings includes charitable contributions that have not been allocated to the firm's geographic regions.
- Substantially all of the amounts in Americas were attributable to the U.S.
- Asia includes Australia and New Zealand.

Note 26.

Credit Concentrations

The firm's concentrations of credit risk arise from its market making, client facilitation, investing, underwriting, lending and collateralized transactions, and cash management activities, and may be impacted by changes in economic, industry or political factors. These activities expose the firm to many different industries and counterparties, and may also subject the firm to a concentration of credit risk to a particular central bank, counterparty, borrower or issuer, including sovereign issuers, or to a particular clearing house or exchange. The firm seeks to mitigate credit risk by actively monitoring exposures and obtaining collateral from counterparties as deemed appropriate.

The firm measures and monitors its credit exposure based on amounts owed to the firm after taking into account risk mitigants that management considers when determining credit risk. Such risk mitigants include netting and collateral arrangements and economic hedges, such as credit derivatives, futures and forward contracts. Netting and collateral agreements permit the firm to offset receivables and payables with such counterparties and/or enable the firm to obtain collateral on an upfront or contingent basis.

The table below presents the credit concentrations in cash instruments included in financial instruments owned.

	As of December	
$ in millions	**2018**	2017
U.S. government and agency obligations	**$110,616**	$76,418
% of total assets	**11.9%**	8.3%
Non-U.S. government and agency obligations	**$ 43,607**	$33,956
% of total assets	**4.7%**	3.7%

In addition, the firm had $90.47 billion as of December 2018 and $76.13 billion as of December 2017 of cash deposits held at central banks (included in cash and cash equivalents), of which $29.20 billion as of December 2018 and $50.86 billion as of December 2017 was held at the Federal Reserve Bank of New York.

As of both December 2018 and December 2017, the firm did not have credit exposure to any other counterparty that exceeded 2% of total assets.

Collateral obtained by the firm related to derivative assets is principally cash and is held by the firm or a third-party custodian. Collateral obtained by the firm related to resale agreements and securities borrowed transactions is primarily U.S. government and agency obligations and non-U.S. government and agency obligations. See Note 10 for further information about collateralized agreements and financings.

The table below presents U.S. government and agency obligations and non-U.S. government and agency obligations that collateralize resale agreements and securities borrowed transactions.

	As of December	
$ in millions	**2018**	2017
U.S. government and agency obligations	**$ 78,828**	$96,905
Non-U.S. government and agency obligations	**$ 76,745**	$92,850

In the table above:

- Non-U.S. government and agency obligations primarily consists of securities issued by the governments of Japan, France, the U.K. and Germany.
- Given that the firm's primary credit exposure on such transactions is to the counterparty to the transaction, the firm would be exposed to the collateral issuer only in the event of counterparty default.

Note 27.

Legal Proceedings

The firm is involved in a number of judicial, regulatory and arbitration proceedings (including those described below) concerning matters arising in connection with the conduct of the firm's businesses. Many of these proceedings are in early stages, and many of these cases seek an indeterminate amount of damages.

Under ASC 450, an event is "reasonably possible" if "the chance of the future event or events occurring is more than remote but less than likely" and an event is "remote" if "the chance of the future event or events occurring is slight." Thus, references to the upper end of the range of reasonably possible loss for cases in which the firm is able to estimate a range of reasonably possible loss mean the upper end of the range of loss for cases for which the firm believes the risk of loss is more than slight.

With respect to matters described below for which management has been able to estimate a range of reasonably possible loss where (i) actual or potential plaintiffs have claimed an amount of money damages, (ii) the firm is being, or threatened to be, sued by purchasers in a securities offering and is not being indemnified by a party that the firm believes will pay the full amount of any judgment, or (iii) the purchasers are demanding that the firm repurchase securities, management has estimated the upper end of the range of reasonably possible loss as being equal to (a) in the case of (i), the amount of money damages claimed, (b) in the case of (ii), the difference between the initial sales price of the securities that the firm sold in such offering and the estimated lowest subsequent price of such securities prior to the action being commenced and (c) in the case of (iii), the price that purchasers paid for the securities less the estimated value, if any, as of December 2018 of the relevant securities, in each of cases (i), (ii) and (iii), taking into account any other factors believed to be relevant to the particular matter or matters of that type. As of the date hereof, the firm has estimated the upper end of the range of reasonably possible aggregate loss for such matters and for any other matters described below where management has been able to estimate a range of reasonably possible aggregate loss to be approximately $1.9 billion in excess of the aggregate reserves for such matters.

Management is generally unable to estimate a range of reasonably possible loss for matters other than those included in the estimate above, including where (i) actual or potential plaintiffs have not claimed an amount of money damages, except in those instances where management can otherwise determine an appropriate amount, (ii) matters are in early stages, (iii) matters relate to regulatory investigations or reviews, except in those instances where management can otherwise determine an appropriate amount, (iv) there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class, (v) there is uncertainty as to the outcome of pending appeals or motions, (vi) there are significant factual issues to be resolved, and/or (vii) there are novel legal issues presented. For example, the firm's potential liabilities with respect to the investigations and reviews described below in "Regulatory Investigations and Reviews and Related Litigation" generally are not included in management's estimate of reasonably possible loss. However, management does not believe, based on currently available information, that the outcomes of such other matters will have a material adverse effect on the firm's financial condition, though the outcomes could be material to the firm's operating results for any particular period, depending, in part, upon the operating results for such period. See Note 18 for further information about mortgage-related contingencies.

1Malaysia Development Berhad (1MDB)-Related Matters

The firm has received subpoenas and requests for documents and information from various governmental and regulatory bodies and self-regulatory organizations as part of investigations and reviews relating to financing transactions and other matters involving 1MDB, a sovereign wealth fund in Malaysia. Subsidiaries of the firm acted as arrangers or purchasers of approximately $6.5 billion of debt securities of 1MDB.

On November 1, 2018, the U.S. Department of Justice (DOJ) unsealed a criminal information and guilty plea by Tim Leissner, a former participating managing director of the firm, and an indictment against Ng Chong Hwa, a former managing director of the firm, and Low Taek Jho. Leissner pleaded guilty to a two-count criminal information charging him with conspiring to launder money and conspiring to violate the U.S. Foreign Corrupt Practices Act's (FCPA) anti-bribery and internal accounting controls provisions. Low and Ng were charged in a three-count indictment with conspiring to launder money and conspiring to violate the FCPA's anti-bribery provisions. On August 28, 2018, Leissner's guilty plea was accepted by the U.S. District Court for the Eastern District of New York and Leissner was adjudicated guilty on both counts. Ng was also charged in this indictment with conspiring to violate the FCPA's internal accounting controls provisions. The charging documents state, among other things, that Leissner and Ng participated in a conspiracy to misappropriate proceeds of the 1MDB offerings for themselves and to pay bribes to various government officials to obtain and retain 1MDB business for the firm. The plea and charging documents indicate that Leissner and Ng knowingly and willfully circumvented the firm's system of internal accounting controls, in part by repeatedly lying to control personnel and internal committees that reviewed these offerings. The indictment of Ng and Low alleges that the firm's system of internal accounting controls could be easily circumvented and that the firm's business culture, particularly in Southeast Asia, at times prioritized consummation of deals ahead of the proper operation of its compliance functions. In addition, an unnamed participating managing director of the firm is alleged to have been aware of the bribery scheme and to have agreed not to disclose this information to the firm's compliance and control personnel. That employee, who was identified as a co-conspirator, has been put on administrative leave.

On December 17, 2018, the Attorney General of Malaysia issued a press statement that (i) criminal charges in Malaysia had been filed against Goldman Sachs International (GSI), as the arranger of three offerings of debt securities of 1MDB, aggregating approximately $6.5 billion in principal amount, for alleged disclosure deficiencies in the offering documents relating to, among other things, the use of proceeds for the debt securities, (ii) Goldman Sachs (Asia) LLC (GS Asia), Goldman Sachs (Singapore) PTE (GS Singapore), Leissner, Low and Jasmine Loo Ai Swan had been criminally charged in Malaysia, and Ng would be charged shortly, and (iii) prosecutors in Malaysia will seek criminal fines against the accused in excess of $2.7 billion plus the $600 million of fees received in connection with the debt offerings.

The firm has received multiple demands, beginning in November 2018, from alleged shareholders under Section 220 of the Delaware General Corporation Law for books and records relating to, among other things, the firm's involvement with 1MDB and the firm's compliance procedures.

On February 19, 2019, a purported shareholder derivative action relating to 1MDB was filed in the U.S. District Court for the Southern District of New York against Group Inc. and the current directors and a former chairman and chief executive officer of the firm. The complaint, which seeks unspecified damages and disgorgement, alleges breaches of fiduciary duties, including in connection with alleged insider trading by certain current and former directors, unjust enrichment, gross mismanagement and violations of the anti-fraud provisions of the Exchange Act, including in connection with Group Inc.'s common stock repurchases and solicitation of proxies.

On November 21, 2018, a summons with notice was filed in the New York Supreme Court, New York County, by International Petroleum Investment Company, which guaranteed certain debt securities issued by 1MDB, and its subsidiary Aabar Investments PJS. The summons with notice makes unspecified claims relating to 1MDB and seeks unspecified compensatory and punitive damages and other relief against Group Inc., GSI, GS Asia, GS Singapore, Goldman Sachs (Malaysia) SDN BHD, Leissner, Ng, and an employee of the firm, as well as individuals (who are not employees of the firm) formerly associated with the plaintiffs.

On December 20, 2018, a putative securities class action lawsuit was filed in the U.S. District Court for the Southern District of New York against Group Inc. and certain current and former officers of the firm alleging violations of the anti-fraud provisions of the Exchange Act with respect to Group Inc.'s disclosures concerning 1MDB and seeking unspecified damages.

The firm is cooperating with the DOJ and all other governmental and regulatory investigations relating to 1MDB. Proceedings by the DOJ or other governmental or regulatory authorities could result in the imposition of significant fines, penalties and other sanctions against the firm, including restrictions on the firm's activities.

Mortgage-Related Matters

Beginning in April 2010, a number of purported securities law class actions were filed in the U.S. District Court for the Southern District of New York challenging the adequacy of Group Inc.'s public disclosure of, among other things, the firm's activities in the collateralized debt obligation market, and the firm's conflict of interest management.

The consolidated amended complaint filed on July 25, 2011, which names as defendants Group Inc. and certain current and former officers and employees of Group Inc. and its affiliates, generally alleges violations of Sections 10(b) and 20(a) of the Exchange Act and seeks unspecified damages. The defendants have moved for summary judgment. On December 11, 2018, the Second Circuit Court of Appeals granted the defendants' petition for interlocutory review of the district court's August 14, 2018 grant of class certification. On January 23, 2019, the district court stayed proceedings in the district court pending the appellate court's decision.

In June 2012, the Board received a demand from a shareholder that the Board investigate and take action relating to the firm's mortgage-related activities and to stock sales by certain directors and executives of the firm. On February 15, 2013, this shareholder filed a putative shareholder derivative action in New York Supreme Court, New York County, against Group Inc. and certain current or former directors and employees, based on these activities and stock sales. The derivative complaint includes allegations of breach of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement and corporate waste, and seeks, among other things, unspecified monetary damages, disgorgement of profits and certain corporate governance and disclosure reforms. On May 28, 2013, Group Inc. informed the shareholder that the Board completed its investigation and determined to refuse the demand. On June 20, 2013, the shareholder made a books and records demand requesting materials relating to the Board's determination. The parties have agreed to stay proceedings in the putative derivative action pending resolution of the books and records demand.

In addition, the Board has received books and records demands from several shareholders for materials relating to, among other subjects, the firm's mortgage servicing and foreclosure activities, participation in federal programs providing assistance to financial institutions and homeowners, loan sales to Fannie Mae and Freddie Mac, mortgage-related activities and conflicts management.

Beginning on February 15, 2019, two summonses with notice were filed against Goldman Sachs Mortgage Company and GS Mortgage Securities Corp. in New York Supreme Court, New York County, by U.S. Bank National Association, as trustee for two residential mortgage-backed securitization trusts. The summonses with notice generally allege that mortgage loans in the trusts failed to conform to applicable representations and warranties and seek specific performance or, alternatively, compensatory damages and other relief.

The firm has received subpoenas or requests for information from, and is engaged in discussions with, certain regulators and law enforcement agencies with which it has not entered into settlement agreements as part of inquiries or investigations relating to mortgage-related matters.

Director Compensation-Related Litigation

On May 9, 2017, Group Inc. and certain of its current and former directors were named as defendants in a purported direct and derivative shareholder action in the Court of Chancery of the State of Delaware (a similar purported derivative action, filed in June 2015, alleging excessive director compensation over the period 2012 to 2014 was voluntarily dismissed without prejudice in December 2016). The new complaint alleges that excessive compensation has been paid to the non-employee director defendants since 2015, and that certain disclosures in connection with soliciting shareholder approval of the stock incentive plans were deficient. The complaint asserts claims for breaches of fiduciary duties and seeks, among other things, rescission or in some cases rescissory damages, disgorgement, and shareholder votes on several matters. On October 23, 2018, the court declined to approve the parties' proposed settlement. The defendants' July 2017 motion to dismiss is still pending.

Currencies-Related Litigation

GS&Co. and Group Inc. are among the defendants named in putative class actions filed in the U.S. District Court for the Southern District of New York beginning in September 2016 on behalf of putative indirect purchasers of foreign exchange instruments. The consolidated amended complaint, filed on June 30, 2017, generally alleged a conspiracy to manipulate the foreign currency exchange markets and asserted claims under federal and state antitrust laws and state consumer protection laws. On March 15, 2018, the Court granted defendants' motion to dismiss, and on October 25, 2018, plaintiffs' motion for leave to replead was denied as to the claim under federal antitrust law and granted as to the claims under state antitrust and consumer protection laws. On November 28, 2018, the plaintiffs filed a second consolidated amended complaint asserting claims under various state antitrust laws and state consumer protection laws and seeking treble damages in an unspecified amount.

GS&Co. and Group Inc. are among the defendants named in an action filed in the U.S. District Court for the Southern District of New York on November 7, 2018 by certain direct purchasers of foreign exchange instruments that opted out of a class settlement reached with, among others, GS&Co. and Group Inc. The complaint generally alleges that the defendants violated federal antitrust laws in connection with an alleged conspiracy to manipulate the foreign currency exchange markets and seeks injunctive relief, as well as treble damages in an unspecified amount.

GS&Co. and Group Inc. are among the defendants named in two putative class actions filed in the district court of the Central District in Israel on behalf of direct purchasers of foreign exchange instruments. The complaints, filed on September 11, 2018 and September 29, 2018, respectively, generally allege a conspiracy to manipulate prices of foreign exchange instruments. The second putative class action also asserts claims based on misuse of the "last look" features of foreign exchange trading systems.

Financial Advisory Services

Group Inc. and certain of its affiliates are from time to time parties to various civil litigation and arbitration proceedings and other disputes with clients and third parties relating to the firm's financial advisory activities. These claims generally seek, among other things, compensatory damages and, in some cases, punitive damages, and in certain cases allege that the firm did not appropriately disclose or deal with conflicts of interest.

Underwriting Litigation

Firm affiliates are among the defendants in a number of proceedings in connection with securities offerings. In these proceedings, including those described below, the plaintiffs assert class action or individual claims under federal and state securities laws and in some cases other applicable laws, allege that the offering documents for the securities that they purchased contained material misstatements and omissions, and generally seek compensatory and rescissory damages in unspecified amounts. Certain of these proceedings involve additional allegations.

Cobalt International Energy. Group Inc., certain former directors of Cobalt International Energy, Inc. (Cobalt), who were designated by affiliates of Group Inc., and GS&Co. are among defendants in a putative securities class action relating to certain offerings of Cobalt's securities, and are among the parties that have reached a settlement. On February 13, 2019, the court approved a settlement of the claims against the Goldman Sachs defendants. The firm has paid its full contribution to the settlement fund.

Adeptus Health. GS&Co. is among the underwriters named as defendants in several putative securities class actions, filed beginning in October 2016 and consolidated in the U.S. District Court for the Eastern District of Texas. In addition to the underwriters, the defendants include certain former directors and officers of Adeptus Health Inc. (Adeptus), as well as Adeptus' sponsor. As to the underwriters, the consolidated complaint, filed on November 21, 2017, relates to the $124 million June 2014 initial public offering, the $154 million May 2015 secondary equity offering, the $411 million July 2015 secondary equity offering, and the $175 million June 2016 secondary equity offering. GS&Co. underwrote 1.69 million shares of common stock in the June 2014 initial public offering representing an aggregate offering price of approximately $37 million, 962,378 shares of common stock in the May 2015 offering representing an aggregate offering price of approximately $61 million, 1.76 million shares of common stock in the July 2015 offering representing an aggregate offering price of approximately $184 million, and all the shares of common stock in the June 2016 offering representing an aggregate offering price of approximately $175 million. On April 19, 2017, Adeptus filed for Chapter 11 bankruptcy. On September 12, 2018, the defendants' motions to dismiss were granted as to the June 2014 and May 2015 offerings but denied as to the July 2015 and June 2016 offerings. On September 26, 2018, plaintiffs filed an amended consolidated complaint to remove the dismissed claims. On December 7, 2018, plaintiffs moved for class certification.

SunEdison. GS&Co. is among the underwriters named as defendants in several putative class actions and individual actions filed beginning in March 2016 relating to the August 2015 public offering of $650 million of SunEdison, Inc. (SunEdison) convertible preferred stock. The defendants also include certain of SunEdison's directors and officers. On April 21, 2016, SunEdison filed for Chapter 11 bankruptcy. The pending cases were transferred to the U.S. District Court for the Southern District of New York and on March 17, 2017, plaintiffs in the putative class action filed a consolidated amended complaint. GS&Co., as underwriter, sold 138,890 shares of SunEdison convertible preferred stock in the offering, representing an aggregate offering price of approximately $139 million. On March 6, 2018, the defendants' motion to dismiss in the class action was granted in part and denied in part. On February 11, 2019, plaintiffs' motion for class certification in the class action was granted. On April 10, 2018 and April 17, 2018, certain plaintiffs in the individual actions filed amended complaints. The defendants have reached a settlement with certain plaintiffs in the individual actions.

Valeant Pharmaceuticals International. GS&Co. and Goldman Sachs Canada Inc. (GS Canada) are among the underwriters and initial purchasers named as defendants in a putative class action filed on March 2, 2016 in the Superior Court of Quebec, Canada. In addition to the underwriters and initial purchasers, the defendants include Valeant Pharmaceuticals International, Inc. (Valeant), certain directors and officers of Valeant and Valeant's auditor. As to GS&Co. and GS Canada, the complaint relates to the June 2013 public offering of $2.3 billion of common stock, the June 2013 Rule 144A offering of $3.2 billion principal amount of senior notes, and the November 2013 Rule 144A offering of $900 million principal amount of senior notes. The complaint asserts claims under the Quebec Securities Act and the Civil Code of Quebec. On August 29, 2017, the court certified a class that includes only non-U.S. purchasers in the offerings. Defendants' motion for leave to appeal the certification was denied on November 30, 2017.

GS&Co. and GS Canada, as sole underwriters, sold 5,334,897 shares of common stock in the June 2013 offering to non-U.S. purchasers representing an aggregate offering price of approximately $453 million and, as initial purchasers, had a proportional share of sales to non-U.S. purchasers of approximately CAD14.2 million in principal amount of senior notes in the June 2013 and November 2013 Rule 144A offerings.

Snap Inc. GS&Co. is among the underwriters named as defendants in putative securities class actions pending in California Superior Court, County of Los Angeles and the U.S. District Court for the Central District of California beginning in May 2017, relating to Snap Inc.'s $3.91 billion March 2017 initial public offering. In addition to the underwriters, the defendants include Snap Inc. and certain of its officers and directors. GS&Co. underwrote 57,040,000 shares of common stock representing an aggregate offering price of approximately $970 million. The underwriter defendants, including GS&Co., were voluntarily dismissed from the federal action on September 18, 2018.

Sea Limited. GS Asia is among the underwriters named as defendants in a putative securities class action filed on November 1, 2018 in the Supreme Court of New York, County of New York, relating to Sea Limited's $989 million October 2017 initial public offering of American depository shares. In addition to the underwriters, the defendants include Sea Limited and certain of its officers and directors. GS Asia underwrote 28,026,721 American depository shares representing an aggregate offering price of approximately $420 million. On January 25, 2019, the plaintiffs filed an amended complaint.

Investment Management Services

Group Inc. and certain of its affiliates are parties to various civil litigation and arbitration proceedings and other disputes with clients relating to losses allegedly sustained as a result of the firm's investment management services. These claims generally seek, among other things, restitution or other compensatory damages and, in some cases, punitive damages.

Interest Rate Swap Antitrust Litigation

Group Inc., GS&Co., GSI, GS Bank USA and Goldman Sachs Financial Markets, L.P. (GSFM) are among the defendants named in a putative antitrust class action relating to the trading of interest rate swaps, filed in November 2015 and consolidated in the U.S. District Court for the Southern District of New York. The same Goldman Sachs entities also are among the defendants named in two antitrust actions relating to the trading of interest rate swaps, commenced in April 2016 and June 2018, respectively, in the U.S. District Court for the Southern District of New York by three operators of swap execution facilities and certain of their affiliates. These actions have been consolidated for pretrial proceedings. The complaints generally assert claims under federal antitrust law and state common law in connection with an alleged conspiracy among the defendants to preclude exchange trading of interest rate swaps. The complaints in the individual actions also assert claims under state antitrust law. The complaints seek declaratory and injunctive relief, as well as treble damages in an unspecified amount. Defendants moved to dismiss the class and the first individual action on January 20, 2017. On July 28, 2017, the district court issued a decision dismissing the state common law claims asserted by the plaintiffs in the first individual action and otherwise limiting the state common law claim in the putative class action and the antitrust claims in both actions to the period from 2013 to 2016. On May 30, 2018, plaintiffs in the putative class action filed a third consolidated amended complaint, adding allegations as to the surviving claims. On October 26, 2018, plaintiffs in the putative class action filed a motion for leave to file a fourth amended complaint. On November 20, 2018, the court granted in part and denied in part the defendants' motion to dismiss the second individual action, dismissing the state common law claims for unjust enrichment and tortious interference but denying dismissal of the federal and state antitrust claims.

Securities Lending Antitrust Litigation

Group Inc. and GS&Co. are among the defendants named in a putative antitrust class action and two individual actions relating to securities lending practices filed in the U.S. District Court for the Southern District of New York beginning in August 2017. The complaints generally assert claims under federal antitrust law and state common law in connection with an alleged conspiracy among the defendants to preclude the development of electronic platforms for securities lending transactions. The individual complaints also assert claims for tortious interference with business relations and under state trade practices law and, in the second individual action, unjust enrichment under state common law. The complaints seek declaratory and injunctive relief, as well as treble damages and restitution in unspecified amounts. Group Inc. was voluntarily dismissed from the putative class action on January 26, 2018. Defendants moved to dismiss the first individual action on June 1, 2018 and moved to dismiss the second individual action on December 21, 2018. Defendants' motion to dismiss the class action complaint was denied on September 27, 2018.

Credit Default Swap Antitrust Litigation

Group Inc., GS&Co., GSI, GS Bank USA and GSFM are among the defendants named in an antitrust action relating to the trading of credit default swaps filed in the U.S. District Court for the Southern District of New York on June 8, 2017 by the operator of a swap execution facility and certain of its affiliates. The complaint generally asserts claims under federal and state antitrust laws and state common law in connection with an alleged conspiracy among the defendants to preclude trading of credit default swaps on the plaintiffs' swap execution facility. The complaint seeks declaratory and injunctive relief, as well as treble damages in an unspecified amount. Defendants moved to dismiss on September 11, 2017.

Commodities-Related Litigation

GSI is among the defendants named in putative class actions relating to trading in platinum and palladium, filed beginning on November 25, 2014 and most recently amended on May 15, 2017, in the U.S. District Court for the Southern District of New York. The amended complaint generally alleges that the defendants violated federal antitrust laws and the Commodity Exchange Act in connection with an alleged conspiracy to manipulate a benchmark for physical platinum and palladium prices and seek declaratory and injunctive relief, as well as treble damages in an unspecified amount. Defendants moved to dismiss the third consolidated amended complaint on July 21, 2017.

U.S. Treasury Securities Litigation

GS&Co. is among the primary dealers named as defendants in several putative class actions relating to the market for U.S. Treasury securities, filed beginning in July 2015 and consolidated in the U.S. District Court for the Southern District of New York. GS&Co. is also among the primary dealers named as defendants in a similar individual action filed in the U.S. District Court for the Southern District of New York on August 25, 2017. The consolidated class action complaint, filed on December 29, 2017, generally alleges that the defendants violated antitrust laws in connection with an alleged conspiracy to manipulate the when-issued market and auctions for U.S. Treasury securities and that certain defendants, including GS&Co., colluded to preclude trading of U.S. Treasury securities on electronic trading platforms in order to impede competition in the bidding process. The individual action alleges a similar conspiracy regarding manipulation of the when-issued market and auctions, as well as related futures and options in violation of the Commodity Exchange Act. The complaints seek declaratory and injunctive relief, treble damages in an unspecified amount and restitution. Defendants moved to dismiss on February 23, 2018.

Employment-Related Matters

On September 15, 2010, a putative class action was filed in the U.S. District Court for the Southern District of New York by three female former employees. The complaint, as subsequently amended, alleges that Group Inc. and GS&Co. have systematically discriminated against female employees in respect of compensation, promotion and performance evaluations. The complaint alleges a class consisting of all female employees employed at specified levels in specified areas by Group Inc. and GS&Co. since July 2002, and asserts claims under federal and New York City discrimination laws. The complaint seeks class action status, injunctive relief and unspecified amounts of compensatory, punitive and other damages.

On July 17, 2012, the district court issued a decision granting in part Group Inc.'s and GS&Co.'s motion to strike certain of plaintiffs' class allegations on the ground that plaintiffs lacked standing to pursue certain equitable remedies and denying Group Inc.'s and GS&Co.'s motion to strike plaintiffs' class allegations in their entirety as premature. On March 21, 2013, the U.S. Court of Appeals for the Second Circuit held that arbitration should be compelled with one of the named plaintiffs, who as a managing director was a party to an arbitration agreement with the firm. On March 10, 2015, the magistrate judge to whom the district judge assigned the remaining plaintiffs' May 2014 motion for class certification recommended that the motion be denied in all respects. On August 3, 2015, the magistrate judge granted the plaintiffs' motion to intervene two female individuals, one of whom was employed by the firm as of September 2010 and the other of whom ceased to be an employee of the firm subsequent to the magistrate judge's decision. On March 30, 2018, the district court certified a damages class as to the plaintiffs' disparate impact and treatment claims. On September 4, 2018, the Second Circuit Court of Appeals denied defendants' petition for interlocutory review of the district court's class certification decision and subsequently denied defendants' petition for rehearing. On September 27, 2018, plaintiffs advised the district court that they would not seek to certify a class for injunctive and declaratory relief.

Regulatory Investigations and Reviews and Related Litigation

Group Inc. and certain of its affiliates are subject to a number of other investigations and reviews by, and in some cases have received subpoenas and requests for documents and information from, various governmental and regulatory bodies and self-regulatory organizations and litigation and shareholder requests relating to various matters relating to the firm's businesses and operations, including:

- The 2008 financial crisis;
- The public offering process;
- The firm's investment management and financial advisory services;
- Conflicts of interest;
- Research practices, including research independence and interactions between research analysts and other firm personnel, including investment banking personnel, as well as third parties;
- Transactions involving government-related financings and other matters, municipal securities, including wall-cross procedures and conflict of interest disclosure with respect to state and municipal clients, the trading and structuring of municipal derivative instruments in connection with municipal offerings, political contribution rules, municipal advisory services and the possible impact of credit default swap transactions on municipal issuers;
- The offering, auction, sales, trading and clearance of corporate and government securities, currencies, commodities and other financial products and related sales and other communications and activities, as well as the firm's supervision and controls relating to such activities, including compliance with applicable short sale rules, algorithmic, high-frequency and quantitative trading, the firm's U.S. alternative trading system (dark pool), futures trading, options trading, when-issued trading, transaction reporting, technology systems and controls, securities lending practices, trading and clearance of credit derivative instruments and interest rate swaps, commodities activities and metals storage, private placement practices, allocations of and trading in securities, and trading activities and communications in connection with the establishment of benchmark rates, such as currency rates;
- Compliance with the FCPA;
- The firm's hiring and compensation practices;
- The firm's system of risk management and controls; and
- Insider trading, the potential misuse and dissemination of material nonpublic information regarding corporate and governmental developments and the effectiveness of the firm's insider trading controls and information barriers.

The firm is cooperating with all such governmental and regulatory investigations and reviews.

Note 28.

Employee Benefit Plans

The firm sponsors various pension plans and certain other postretirement benefit plans, primarily healthcare and life insurance. The firm also provides certain benefits to former or inactive employees prior to retirement.

Defined Benefit Pension Plans and Postretirement Plans

Employees of certain non-U.S. subsidiaries participate in various defined benefit pension plans. These plans generally provide benefits based on years of credited service and a percentage of eligible compensation. The firm maintains a defined benefit pension plan for certain U.K. employees. As of April 2008, the U.K. defined benefit plan was closed to new participants and frozen for existing participants as of March 31, 2016. The non-U.S. plans do not have a material impact on the firm's consolidated results of operations.

The firm also maintains a defined benefit pension plan for substantially all U.S. employees hired prior to November 1, 2003. As of November 2004, this plan was closed to new participants and frozen for existing participants. In addition, the firm maintains unfunded postretirement benefit plans that provide medical and life insurance for eligible retirees and their dependents covered under these programs. These plans do not have a material impact on the firm's consolidated results of operations.

The firm recognizes the funded status of its defined benefit pension and postretirement plans, measured as the difference between the fair value of the plan assets and the benefit obligation, in the consolidated statements of financial condition. As of December 2018, other assets included $462 million (related to overfunded pension plans) and other liabilities included $344 million, related to these plans. As of December 2017, other assets included $346 million (related to overfunded pension plans) and other liabilities included $606 million, related to these plans.

Defined Contribution Plans

The firm contributes to employer-sponsored U.S. and non-U.S. defined contribution plans. The firm's contribution to these plans was $240 million for 2018, $257 million for 2017 and $236 million for 2016.

Note 29.

Employee Incentive Plans

The cost of employee services received in exchange for a share-based award is generally measured based on the grant-date fair value of the award. Share-based awards that do not require future service (i.e., vested awards, including awards granted to retirement-eligible employees) are expensed immediately. Share-based awards that require future service are amortized over the relevant service period. Effective January 2017, forfeitures are recorded when they occur. Prior to January 2017, expected forfeitures were estimated and recorded over the vesting period. See Note 3 for information about the adoption of ASU No. 2016-09.

Cash dividend equivalents paid on RSUs are charged to retained earnings. If RSUs that require future service are forfeited, the related dividend equivalents originally charged to retained earnings are reclassified to compensation expense in the period in which forfeiture occurs.

The firm generally issues new shares of common stock upon delivery of share-based awards. In certain cases, primarily related to conflicted employment (as outlined in the applicable award agreements), the firm may cash settle share-based compensation awards accounted for as equity instruments. For these awards, whose terms allow for cash settlement, additional paid-in capital is adjusted to the extent of the difference between the value of the award at the time of cash settlement and the grant-date value of the award.

Stock Incentive Plan

The firm sponsors a stock incentive plan, The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (2018 SIP), which provides for grants of RSUs, restricted stock, dividend equivalent rights, incentive stock options, nonqualified stock options, stock appreciation rights, and other share-based awards, each of which may be subject to performance conditions. On May 2, 2018, shareholders approved the 2018 SIP. The 2018 SIP replaced The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (2015 SIP) previously in effect, and applies to awards granted on or after the date of approval. The 2015 SIP had previously replaced The Goldman Sachs Amended and Restated Stock Incentive Plan (2013) (2013 SIP).

As of December 2018, 68.2 million shares were available for grant under the 2018 SIP. If any shares of common stock underlying awards granted under the 2018 SIP, 2015 SIP or 2013 SIP are not delivered due to forfeiture, termination or cancellation or are surrendered or withheld, those shares will become available to be delivered under the 2018 SIP. Shares available for grant are also subject to adjustment for certain changes in corporate structure as permitted under the 2018 SIP. The 2018 SIP is scheduled to terminate on the date of the annual meeting of shareholders that occurs in 2022.

Restricted Stock Units

The firm grants RSUs (including RSUs subject to performance conditions) to employees, which are generally valued based on the closing price of the underlying shares on the date of grant after taking into account a liquidity discount for any applicable post-vesting and delivery transfer restrictions. RSUs generally vest and underlying shares of common stock deliver (net of required withholding tax) as outlined in the applicable award agreements. Award agreements generally provide that vesting is accelerated in certain circumstances, such as on retirement, death, disability and conflicted employment. Delivery of the underlying shares of common stock, which generally occurs over a three-year period, is conditioned on the grantees satisfying certain vesting and other requirements outlined in the award agreements.

The table below presents the 2018 activity related to RSUs.

	Restricted Stock Units Outstanding		Weighted Average Grant-Date Fair Value of Restricted Stock Units Outstanding	
	Future Service Required	No Future Service Required	Future Service Required	No Future Service Required
Beginning balance	4,123,582	14,162,828	$182.50	$166.30
Granted	**3,887,934**	**5,342,848**	**$220.83**	**$216.05**
Forfeited	**(423,154)**	**(195,323)**	**$192.16**	**$167.92**
Delivered	**–**	**(9,807,881)**	**$ –**	**$172.40**
Vested	**(3,826,523)**	**3,826,523**	**$185.62**	**$185.62**
Ending balance	**3,761,839**	**13,328,995**	**$217.85**	**$187.27**

In the table above:

- The weighted average grant-date fair value of RSUs granted was $218.06 during 2018, $206.88 during 2017 and $135.92 during 2016. The fair value of the RSUs granted included a liquidity discount of 11.9% during 2018, 10.7% during 2017 and 10.5% during 2016, to reflect post-vesting and delivery transfer restrictions, generally of up to 4 years.
- The aggregate fair value of awards that vested was $1.79 billion during 2018, $2.14 billion during 2017 and $2.26 billion during 2016.
- The ending balance included restricted stock subject to future service requirements of 1,649 shares as of December 2018 and 3,298 shares as of December 2017.
- The ending balance included RSUs subject to performance conditions and not subject to future service requirements of 174,579 RSUs as of December 2018 and 62,023 RSUs as of December 2017.

In relation to 2018 year-end, during the first quarter of 2019, the firm granted to its employees 11.3 million RSUs, of which 4.0 million RSUs require future service as a condition of delivery for the related shares of common stock. These awards are subject to additional conditions as outlined in the award agreements. Generally, shares underlying these awards, net of required withholding tax, deliver over a three-year period, but are subject to post-vesting and delivery transfer restrictions through January 2024. These grants are not included in the table above.

As of December 2018, there was $448 million of total unrecognized compensation cost related to non-vested share-based compensation arrangements. This cost is expected to be recognized over a weighted average period of 1.85 years.

Stock Options

Stock options generally vested as outlined in the applicable stock option agreement. In general, options expired on the tenth anniversary of the grant date, although they may have been subject to earlier termination or cancellation under certain circumstances in accordance with the terms of the applicable stock option agreement and the SIP in effect at the time of grant.

There were no options outstanding as of December 2018. There were 2.10 million options outstanding as of December 2017, all of which were exercisable. These options were granted in 2008 with an exercise price of $78.78 and, as of December 2017, had an aggregate intrinsic value of $370 million and a remaining life of 1 year.

During 2018, 2.10 million options were exercised with a weighted average exercise price of $78.78. During 2017, 5.86 million options were exercised with a weighted average exercise price of $139.35. The total intrinsic value of options exercised was $288 million during 2018, $589 million during 2017 and $436 million during 2016.

The table below presents the share-based compensation and the related excess tax benefit.

	Year Ended December		
$ in millions	**2018**	2017	2016
Share-based compensation	**$1,850**	$1,812	$2,170
Excess net tax benefit for options exercised	**$ 64**	$ 139	$ 79
Excess net tax benefit for share-based awards	**$ 269**	$ 719	$ 147

In the table above, excess net tax benefit for share-based awards includes the net tax benefit on dividend equivalents paid on RSUs and the delivery of common stock underlying share-based awards, as well as the excess net tax benefit for options exercised. Following the adoption of ASU No. 2016-09 in January 2017, such amounts were recognized prospectively in income tax expense. In prior years, such amounts were recognized in additional paid-in capital. See Note 3 for further information about this ASU.

Note 30.

Parent Company

Group Inc. — Condensed Statements of Earnings

	Year Ended December		
$ in millions	**2018**	2017	2016
Revenues			
Dividends from subsidiaries and other affiliates:			
Bank	**$ 102**	$ 550	$ 53
Nonbank	**16,368**	11,016	5,465
Other revenues	**(1,376)**	(384)	155
Total non-interest revenues	**15,094**	11,182	5,673
Interest income	**6,617**	4,638	4,140
Interest expense	**8,114**	5,978	4,543
Net interest loss	**(1,497)**	(1,340)	(403)
Total net revenues	**13,597**	9,842	5,270
Operating expenses			
Compensation and benefits	**299**	330	343
Other expenses	**1,192**	428	332
Total operating expenses	**1,491**	758	675
Pre-tax earnings	**12,106**	9,084	4,595
Provision/(benefit) for taxes	**(1,173)**	3,404	(518)
Undistributed earnings/(loss) of subsidiaries and other affiliates	**(2,820)**	(1,394)	2,285
Net earnings	**10,459**	4,286	7,398
Preferred stock dividends	**599**	601	311
Net earnings applicable to common shareholders	**$ 9,860**	$ 3,685	$7,087

Supplemental Disclosures:

In the condensed statements of earnings above, revenues and expenses included the following with subsidiaries and other affiliates:

- Dividends from bank subsidiaries included cash dividends of $76 million for 2018, $525 million for 2017 and $32 million for 2016.
- Dividends from nonbank subsidiaries and other affiliates included cash dividends of $10.78 billion for 2018, $7.98 billion for 2017 and $3.46 billion for 2016.
- Other revenues included $(1.69) billion for 2018, $661 million for 2017 and $49 million for 2016.
- Interest income included $6.33 billion for 2018, $4.65 billion for 2017 and $4.08 billion in 2016.
- Interest expense included $2.39 billion for 2018, $1.05 billion for 2017 and $201 million for 2016.
- Other expenses included $159 million for 2018, $45 million for 2017 and $1 million for 2016.

Group Inc.'s provision for taxes for 2017 included substantially all of the firm's $4.40 billion estimated income tax expense related to Tax Legislation. During 2018, the firm finalized this estimate to reflect the impact of updated information, including subsequent guidance issued by the IRS, resulting in a $487 million income tax benefit, which was primarily included in Group Inc.'s benefit for taxes for 2018. See Note 24 for further information about Tax Legislation.

Group Inc. — Condensed Statements of Financial Condition

	As of December	
$ in millions	**2018**	2017
Assets		
Cash and cash equivalents with third-party banks	**$ 103**	$ 38
Loans to and receivables from subsidiaries:		
Bank	**1,019**	721
Nonbank (includes $5,461 and $0 at fair value)	**225,471**	236,050
Investments in subsidiaries and other affiliates:		
Bank	**28,737**	26,599
Nonbank	**61,481**	67,279
Financial instruments owned (at fair value)	**13,541**	10,248
Other assets	**3,653**	5,898
Total assets	**$334,005**	$346,833
Liabilities and shareholders' equity		
Payables to subsidiaries	**$ 702**	$ 1,005
Financial instruments sold, but not yet purchased (at fair value)	**281**	254
Unsecured short-term borrowings:		
With third parties (includes $2,615 and $2,484 at fair value)	**25,060**	31,871
With subsidiaries	**7,558**	25,699
Unsecured long-term borrowings:		
With third parties (includes $16,395 and $18,207 at fair value)	**183,121**	190,502
With subsidiaries	**23,343**	11,068
Other liabilities	**3,755**	4,191
Total liabilities	**243,820**	264,590
Commitments, contingencies and guarantees		
Shareholders' equity		
Preferred stock	**11,203**	11,853
Common stock	**9**	9
Share-based awards	**2,845**	2,777
Additional paid-in capital	**54,005**	53,357
Retained earnings	**100,100**	91,519
Accumulated other comprehensive income/(loss)	**693**	(1,880)
Stock held in treasury, at cost	**(78,670)**	(75,392)
Total shareholders' equity	**90,185**	82,243
Total liabilities and shareholders' equity	**$334,005**	$346,833

Supplemental Disclosures:

Goldman Sachs Funding LLC (Funding IHC), a wholly-owned, direct subsidiary of Group Inc., has provided Group Inc. with a committed line of credit that allows Group Inc. to draw sufficient funds to meet its cash needs in the ordinary course of business.

Financial instruments owned included derivative contracts with subsidiaries of $683 million as of December 2018 and $570 million as of December 2017.

Financial instruments sold, but not yet purchased included derivative contracts with subsidiaries of $280 million as of December 2018 and $218 million as of December 2017.

As of December 2018, unsecured long-term borrowings with subsidiaries by maturity date are $22.56 billion in 2020, $91 million in 2021, $74 million in 2022, $66 million in 2023 and $554 million in 2024-thereafter.

Group Inc. — Condensed Statements of Cash Flows

	Year Ended December		
$ in millions	**2018**	2017	2016
Cash flows from operating activities			
Net earnings	**$ 10,459**	$ 4,286	$ 7,398
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Undistributed (earnings)/loss of subsidiaries and other affiliates	**2,820**	1,394	(2,285)
Depreciation and amortization	**51**	56	52
Deferred income taxes	**(2,817)**	4,358	134
Share-based compensation	**105**	152	193
Loss/(gain) related to extinguishment of unsecured borrowings	**(160)**	(114)	3
Changes in operating assets and liabilities:			
Financial instruments owned (excluding available-for-sale securities)	**(1,597)**	(309)	(1,580)
Financial instruments sold, but not yet purchased	**27**	(521)	332
Other, net	**1,804**	(757)	337
Net cash provided by operating activities	**10,692**	8,545	4,584
Cash flows from investing activities			
Purchase of property, leasehold improvements and equipment	**(63)**	(66)	(79)
Repayments/(issuances) of short-term loans to subsidiaries, net	**10,829**	(14,415)	(3,994)
Issuance of term loans to subsidiaries	**(30,336)**	(42,234)	(28,498)
Repayments of term loans by subsidiaries	**25,956**	22,039	32,265
Purchase of investments	**(3,140)**	(6,491)	–
Capital distributions from/(contributions to) subsidiaries, net	**1,807**	388	(3,265)
Net cash provided by/(used for) investing activities	**5,053**	(40,779)	(3,571)
Cash flows from financing activities			
Unsecured short-term borrowings, net:			
With third parties	**(1,541)**	(424)	(178)
With subsidiaries	**(998)**	23,078	2,290
Proceeds from issuance of long-term borrowings	**26,157**	43,917	40,708
Repayment of long-term borrowings, including the current portion	**(32,429)**	(27,028)	(33,314)
Purchase of APEX, senior guaranteed securities and trust preferred securities	**(35)**	(237)	(1,171)
Preferred stock redemption	**(650)**	(850)	–
Common stock repurchased	**(3,294)**	(6,772)	(6,078)
Settlement of share-based awards in satisfaction of withholding tax requirements	**(1,118)**	(2,223)	(1,128)
Dividends and dividend equivalents paid on common stock, preferred stock and share-based awards	**(1,810)**	(1,769)	(1,706)
Proceeds from issuance of preferred stock, net of issuance costs	**–**	1,495	1,303
Proceeds from issuance of common stock, including exercise of share-based awards	**38**	7	6
Cash settlement of share-based awards	**–**	(3)	–
Net cash provided by/(used for) financing activities	**(15,680)**	29,191	732
Net increase/(decrease) in cash and cash equivalents	**65**	(3,043)	1,745
Cash and cash equivalents, beginning balance	**38**	3,081	1,336
Cash and cash equivalents, ending balance $	**103**	$ 38	$ 3,081

Supplemental Disclosures:

Cash payments for interest, net of capitalized interest, were $9.83 billion for 2018, $6.31 billion for 2017 and $4.91 billion for 2016, and included $3.05 billion for 2018, $160 million for 2017 and $187 million for 2016 of payments to subsidiaries.

Cash payments/(refunds) for income taxes, net, were $(98) million for 2018, $297 million for 2017 and $61 million for 2016.

Cash flows related to common stock repurchased includes common stock repurchased in the prior period for which settlement occurred during the current period and excludes common stock repurchased during the current period for which settlement occurred in the following period.

Non-cash activities during the year ended December 2018:

- Group Inc. restructured funding for Goldman Sachs Group (UK) Ltd. and Goldman Sachs International, both wholly-owned subsidiaries of Group Inc., which resulted in a net increase in loans to subsidiaries of $5.71 billion and a decrease in equity interest of $5.71 billion.
- Group Inc. exchanged $150 million of liabilities and $46 million of related deferred tax assets for $104 million of equity interest in GS&Co., a wholly owned subsidiary of Group Inc.
- Group Inc. exchanged $35 million of Trust Preferred Securities and common beneficial interests for $35 million of certain of the Group Inc.'s junior subordinated debt.

Non-cash activities during the year ended December 2017:

- Group Inc. exchanged $84.00 billion of certain loans to and receivables from subsidiaries for an $84.00 billion unsecured subordinated note from Funding IHC (included in loans to and receivables from subsidiaries).
- Group Inc. exchanged $750 million of its equity interest in Goldman Sachs (UK) L.L.C. (GS UK), a wholly-owned subsidiary of Group Inc., for a $750 million loan to GS UK.
- Group Inc. exchanged $237 million of Trust Preferred Securities and common beneficial interests for $248 million of Group Inc.'s junior subordinated debt.

Non-cash activities during the year ended December 2016:

- Group Inc. exchanged $1.04 billion of APEX for $1.31 billion of Series E and Series F Preferred Stock. See Note 19 for further information.
- Group Inc. exchanged $127 million of senior guaranteed trust securities for $124 million of Group Inc.'s junior subordinated debt.

Quarterly Results (unaudited)

The tables below present the unaudited quarterly results.

$ in millions, except per share amounts	Three Months Ended December 2018	September 2018	June 2018	March 2018
Non-interest revenues	**$ 7,089**	**$7,964**	**$8,634**	**$ 9,162**
Interest income	**5,468**	**5,061**	**4,920**	**4,230**
Interest expense	**4,477**	**4,205**	**3,918**	**3,312**
Net interest income	**991**	**856**	**1,002**	**918**
Total net revenues	**8,080**	**8,820**	**9,636**	**10,080**
Provision for credit losses	**222**	**174**	**234**	**44**
Operating expenses	**5,150**	**5,568**	**6,126**	**6,617**
Pre-tax earnings	**2,708**	**3,078**	**3,276**	**3,419**
Provision for taxes	**170**	**554**	**711**	**587**
Net earnings	**2,538**	**2,524**	**2,565**	**2,832**
Preferred stock dividends	**216**	**71**	**217**	**95**
Net earnings applicable to common shareholders	**$ 2,322**	**$2,453**	**$2,348**	**$ 2,737**
Earnings per common share:				
Basic	**$ 6.11**	**$ 6.35**	**$ 6.04**	**$ 7.02**
Diluted	**$ 6.04**	**$ 6.28**	**$ 5.98**	**$ 6.95**
Dividends declared per common share	**$ 0.80**	**$ 0.80**	**$ 0.80**	**$ 0.75**

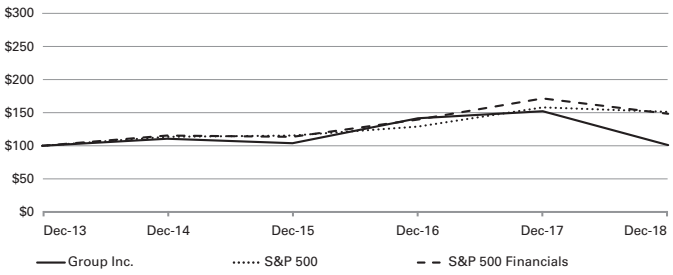
$ in millions, except per share amounts	Three Months Ended December 2017	September 2017	June 2017	March 2017
Non-interest revenues	$ 7,226	$7,660	$7,314	$ 7,598
Interest income	3,736	3,411	3,220	2,746
Interest expense	2,838	2,681	2,432	2,230
Net interest income	898	730	788	516
Total net revenues	8,124	8,390	8,102	8,114
Provision for credit losses	290	64	215	88
Operating expenses	4,726	5,350	5,378	5,487
Pre-tax earnings	3,108	2,976	2,509	2,539
Provision for taxes	5,036	848	678	284
Net earnings/(loss)	(1,928)	2,128	1,831	2,255
Preferred stock dividends	215	93	200	93
Net earnings/(loss) applicable to common shareholders	$(2,143)	$2,035	$1,631	$ 2,162
Earnings/(loss) per common share:				
Basic	$ (5.51)	$ 5.09	$ 4.00	$ 5.23
Diluted	$ (5.51)	$ 5.02	$ 3.95	$ 5.15
Dividends declared per common share	$ 0.75	$ 0.75	$ 0.75	$ 0.65

In the table above:

- These quarterly results were prepared in accordance with U.S. GAAP and reflect all adjustments that are, in the opinion of management, necessary for a fair statement of the results. These adjustments are of a normal, recurring nature. The timing and magnitude of changes in the firm's discretionary compensation accruals (included in operating expenses) can have a significant effect on results in a given quarter.
- Provision for credit losses, previously reported in total net revenues, is now reported as a separate line item in the consolidated statements of earnings. Previously reported amounts have been conformed to the current presentation.

Common Stock Performance

The graph and table below compare the performance of an investment in the firm's common stock from December 31, 2013 (the last trading day before the firm's 2014 fiscal year) through December 31, 2018, with the S&P 500 Index (S&P 500) and the S&P 500 Financials Index (S&P 500 Financials).



	As of December 2013	2014	2015	2016	2017	2018
Group Inc.	$100.00	$110.78	$104.37	$140.80	$151.70	**$100.85**
S&P 500	$100.00	$113.68	$115.24	$129.01	$157.16	**$150.26**
S&P 500 Financials	$100.00	$115.18	$113.38	$139.18	$169.99	**$147.82**

The graph and table above assume $100 was invested on December 31, 2013 in each of the firm's common stock, the S&P 500 and the S&P 500 Financials, and the dividends were reinvested on the date of payment without payment of any commissions. The performance shown represents past performance and should not be considered an indication of future performance.

Supplemental Financial Information

Selected Financial Data

	Year Ended or as of December				
	2018	2017	2016	2015	2014
Income statement data *($ in millions)*					
Non-interest revenues	**$ 32,849**	$ 29,798	$ 28,203	$ 31,045	$ 30,602
Interest income	**19,679**	13,113	9,691	8,452	9,604
Interest expense	**15,912**	10,181	7,104	5,388	5,557
Net interest income	**3,767**	2,932	2,587	3,064	4,047
Total net revenues	**36,616**	32,730	30,790	34,109	34,649
Provision for credit losses	**674**	657	182	289	121
Operating expenses	**23,461**	20,941	20,304	25,042	22,171
Pre-tax earnings	**$ 12,481**	$ 11,132	$ 10,304	$ 8,778	$ 12,357
Balance sheet data *($ in millions)*					
Total assets	**$931,796**	$916,776	$860,165	$861,395	$855,842
Deposits	**$158,257**	$138,604	$124,098	$ 97,519	$ 82,880
Other secured financings (long-term)	**$ 11,878**	$ 9,892	$ 8,405	$ 10,520	$ 7,249
Unsecured long-term borrowings	**$224,149**	$217,687	$189,086	$175,422	$167,302
Total liabilities	**$841,611**	$834,533	$773,272	$774,667	$773,045
Total shareholders' equity	**$ 90,185**	$ 82,243	$ 86,893	$ 86,728	$ 82,797
Common share data *(in millions, except per share amounts)*					
Earnings per common share:					
Basic	**$ 25.53**	$ 9.12	$ 16.53	$ 12.35	$ 17.55
Diluted	**$ 25.27**	$ 9.01	$ 16.29	$ 12.14	$ 17.07
Dividends declared per common share	**$ 3.15**	$ 2.90	$ 2.60	$ 2.55	$ 2.25
Book value per common share	**$ 207.36**	$ 181.00	$ 182.47	$ 171.03	$ 163.01
Basic shares	**380.9**	388.9	414.8	441.6	451.5
Average common shares:					
Basic	**385.4**	401.6	427.4	448.9	458.9
Diluted	**390.2**	409.1	435.1	458.6	473.2
Selected data *(unaudited)*					
ROE	**13.3%**	4.9%	9.4%	7.4%	11.2%
Headcount:					
Americas	**19,700**	18,100	17,400	18,000	16,600
Non-Americas	**16,900**	15,500	15,000	16,000	15,000
Total headcount	**36,600**	33,600	32,400	34,000	31,600
AUS by asset class *($ in billions)*					
Alternative investments	**$ 167**	$ 168	$ 154	$ 148	$ 143
Equity	**301**	321	266	252	236
Fixed income	**677**	660	601	546	516
Long-term AUS	**1,145**	1,149	1,021	946	895
Liquidity products	**397**	345	358	306	283
Total AUS	**$ 1,542**	$ 1,494	$ 1,379	$ 1,252	$ 1,178

In the table above:

- Provision for credit losses, previously reported in total net revenues, is now reported as a separate line item in the consolidated statements of earnings. Previously reported amounts have been conformed to the current presentation.
- The impact of adopting ASU No. 2015-03 was a reduction to both total assets and liabilities of $398 million as of December 2014. See Note 3 to the consolidated financial statements in Part II, Item 8 of the firm's Annual Report on Form 10-K for the year ended December 31, 2015 for further information.
- Basic shares represent common shares outstanding and restricted stock units granted to employees with no future service requirements.
- Headcount consists of employees, and excludes consultants and temporary staff previously reported as total staff.

Statistical Disclosures

Distribution of Assets, Liabilities and Shareholders' Equity

The tables below present information about average balances, interest and average interest rates.

	Average Balance for the Year Ended December		
$ in millions	**2018**	2017	2016
Assets			
U.S.	**$ 65,888**	$ 66,838	$ 72,132
Non-U.S.	**52,773**	42,353	33,342
Total deposits with banks	**118,661**	109,191	105,474
U.S.	**161,783**	159,829	177,930
Non-U.S.	**140,411**	133,156	129,150
Total collateralized agreements	**302,194**	292,985	307,080
U.S.	**168,253**	163,344	147,862
Non-U.S.	**119,602**	112,299	102,387
Total financial instruments owned	**287,855**	275,643	250,249
U.S.	**67,418**	50,742	43,367
Non-U.S.	**6,494**	4,767	4,609
Total loans receivable	**73,912**	55,509	47,976
U.S.	**44,201**	40,642	37,525
Non-U.S.	**43,261**	40,314	32,732
Total other interest-earning assets	**87,462**	80,956	70,257
Total interest-earning assets	**870,084**	814,284	781,036
Cash and due from banks	**11,380**	11,056	13,985
Other non-interest-earning assets	**86,117**	84,264	91,875
Total assets	**$967,581**	$909,604	$886,896
Liabilities			
U.S.	**$117,121**	$101,109	$ 97,255
Non-U.S.	**30,071**	24,356	17,605
Total interest-bearing deposits	**147,192**	125,465	114,860
U.S.	**59,129**	56,614	52,388
Non-U.S.	**45,747**	39,029	31,936
Total collateralized financings	**104,876**	95,643	84,324
U.S.	**33,193**	34,422	36,273
Non-U.S.	**49,295**	41,507	35,797
Total financial instruments sold, but not yet purchased	**82,488**	75,929	72,070
U.S.	**40,360**	38,615	43,684
Non-U.S.	**16,909**	13,318	13,656
Total short-term borrowings	**57,269**	51,933	57,340
U.S.	**212,200**	199,569	182,808
Non-U.S.	**24,173**	15,000	10,488
Total long-term borrowings	**236,373**	214,569	193,296
U.S.	**124,657**	135,804	147,177
Non-U.S.	**63,428**	60,986	59,852
Total other interest-bearing liabilities	**188,085**	196,790	207,029
Total interest-bearing liabilities	**816,283**	760,329	728,919
Non-interest-bearing deposits	**4,273**	3,630	2,996
Other non-interest-bearing liabilities	**61,787**	59,686	68,323
Total liabilities	**882,343**	823,645	800,238
Shareholders' equity			
Preferred stock	**11,253**	11,238	11,304
Common stock	**73,985**	74,721	75,354
Total shareholders' equity	**85,238**	85,959	86,658
Total liabilities and shareholders' equity	**$967,581**	$909,604	$886,896
Percentage of interest-earning assets and interest-bearing liabilities attributable to non-U.S. operations			
Assets	**41.67%**	40.88%	38.69%
Liabilities	**28.13%**	25.54%	23.23%

Supplemental Financial Information

$ in millions	Interest for the Year Ended December 2018	2017	2016
Assets			
U.S.	**$ 1,247**	$ 760	$ 382
Non-U.S.	**171**	59	70
Total deposits with banks	**1,418**	819	452
U.S.	**3,340**	1,335	361
Non-U.S.	**512**	326	330
Total collateralized agreements	**3,852**	1,661	691
U.S.	**4,432**	3,958	3,762
Non-U.S.	**2,462**	1,946	1,682
Total financial instruments owned	**6,894**	5,904	5,444
U.S.	**3,734**	2,386	1,620
Non-U.S.	**414**	292	223
Total loans receivable	**4,148**	2,678	1,843
U.S.	**2,389**	1,523	914
Non-U.S.	**978**	528	347
Total other interest-earning assets	**3,367**	2,051	1,261
Total interest-earning assets	**$19,679**	$13,113	$9,691
Liabilities			
U.S.	**$ 2,317**	$ 1,205	$ 780
Non-U.S.	**289**	175	98
Total interest-bearing deposits	**2,606**	1,380	878
U.S.	**1,760**	735	325
Non-U.S.	**291**	128	117
Total collateralized financings	**2,051**	863	442
U.S.	**803**	682	607
Non-U.S.	**751**	706	644
Total financial instruments sold, but not yet purchased	**1,554**	1,388	1,251
U.S.	**672**	660	401
Non-U.S.	**23**	38	45
Total short-term borrowings	**695**	698	446
U.S.	**5,474**	4,539	4,175
Non-U.S.	**81**	60	67
Total long-term borrowings	**5,555**	4,599	4,242
U.S.	**3,245**	991	(658)
Non-U.S.	**206**	262	503
Total other interest-bearing liabilities	**3,451**	1,253	(155)
Total interest-bearing liabilities	**$15,912**	$10,181	$7,104
Net interest income			
U.S.	**$ 871**	$ 1,150	$1,409
Non-U.S.	**2,896**	1,782	1,178
Net interest income	**$ 3,767**	$ 2,932	$2,587

	Average Rate for the Year Ended December 2018	2017	2016
Assets			
U.S.	**1.89%**	1.14%	0.53%
Non-U.S.	**0.32%**	0.14%	0.21%
Total deposits with banks	**1.20%**	0.75%	0.43%
U.S.	**2.06%**	0.84%	0.20%
Non-U.S.	**0.36%**	0.24%	0.26%
Total collateralized agreements	**1.27%**	0.57%	0.23%
U.S.	**2.63%**	2.42%	2.54%
Non-U.S.	**2.06%**	1.73%	1.64%
Total financial instruments owned	**2.39%**	2.14%	2.18%
U.S.	**5.54%**	4.70%	3.74%
Non-U.S.	**6.38%**	6.13%	4.84%
Total loans receivable	**5.61%**	4.82%	3.84%
U.S.	**5.40%**	3.75%	2.44%
Non-U.S.	**2.26%**	1.31%	1.06%
Total other interest-earning assets	**3.85%**	2.53%	1.79%
Total interest-earning assets	**2.26%**	1.61%	1.24%
Liabilities			
U.S.	**1.98%**	1.19%	0.80%
Non-U.S.	**0.96%**	0.72%	0.56%
Total interest-bearing deposits	**1.77%**	1.10%	0.76%
U.S.	**2.98%**	1.30%	0.62%
Non-U.S.	**0.64%**	0.33%	0.37%
Total collateralized financings	**1.96%**	0.90%	0.52%
U.S.	**2.42%**	1.98%	1.67%
Non-U.S.	**1.52%**	1.70%	1.80%
Total financial instruments sold, but not yet purchased	**1.88%**	1.83%	1.74%
U.S.	**1.67%**	1.71%	0.92%
Non-U.S.	**0.14%**	0.29%	0.33%
Total short-term borrowings	**1.21%**	1.34%	0.78%
U.S.	**2.58%**	2.27%	2.28%
Non-U.S.	**0.34%**	0.40%	0.64%
Total long-term borrowings	**2.35%**	2.14%	2.19%
U.S.	**2.60%**	0.73%	(0.45)%
Non-U.S.	**0.32%**	0.43%	0.84%
Total other interest-bearing liabilities	**1.83%**	0.64%	(0.07)%
Total interest-bearing liabilities	**1.95%**	1.34%	0.97%
Interest rate spread	**0.31%**	0.27%	0.27%
U.S.	**0.17%**	0.24%	0.29%
Non-U.S.	**0.80%**	0.54%	0.39%
Net yield on interest-earning assets	**0.43%**	0.36%	0.33%

In the tables above:

- Assets, liabilities and interest are classified as U.S. and non-U.S. based on the location of the entity in which the assets and liabilities are held.
- Derivative instruments and commodities are included in other non-interest-earning assets and other non-interest-bearing liabilities.
- Total other interest-earning assets primarily consists of certain receivables from customers and counterparties.
- Collateralized financings consists of repurchase agreements and securities loaned.
- Substantially all of the total other interest-bearing liabilities consists of certain payables to customers and counterparties.
- Interest rates for borrowings include the effects of interest rate swaps accounted for as hedges.

Changes in Net Interest Income, Volume and Rate Analysis

The tables below present the effect on net interest income of volume and rate changes. In this analysis, changes due to volume/rate variance have been allocated to volume.

	Year Ended December 2018 versus December 2017		
	Increase (decrease) due to change in:		
$ in millions	**Volume**	**Rate**	**Net Change**
Interest-earning assets			
U.S.	**$ (18)**	**$ 505**	**$ 487**
Non-U.S.	**34**	**78**	**112**
Total deposits with banks	**16**	**583**	**599**
U.S.	**40**	**1,965**	**2,005**
Non-U.S.	**26**	**160**	**186**
Total collateralized agreements	**66**	**2,125**	**2,191**
U.S.	**129**	**345**	**474**
Non-U.S.	**150**	**366**	**516**
Total financial instruments owned	**279**	**711**	**990**
U.S.	**924**	**424**	**1,348**
Non-U.S.	**110**	**12**	**122**
Total loans receivable	**1,034**	**436**	**1,470**
U.S.	**192**	**674**	**866**
Non-U.S.	**67**	**383**	**450**
Total other interest-earning assets	**259**	**1,057**	**1,316**
Change in interest income	**1,654**	**4,912**	**6,566**
Interest-bearing liabilities			
U.S.	**317**	**795**	**1,112**
Non-U.S.	**55**	**59**	**114**
Total interest-bearing deposits	**372**	**854**	**1,226**
U.S.	**75**	**950**	**1,025**
Non-U.S.	**43**	**120**	**163**
Total collateralized financings	**118**	**1,070**	**1,188**
U.S.	**(30)**	**151**	**121**
Non-U.S.	**119**	**(74)**	**45**
Total financial instruments sold, but not yet purchased	**89**	**77**	**166**
U.S.	**29**	**(17)**	**12**
Non-U.S.	**5**	**(20)**	**(15)**
Total short-term borrowings	**34**	**(37)**	**(3)**
U.S.	**326**	**609**	**935**
Non-U.S.	**31**	**(10)**	**21**
Total long-term borrowings	**357**	**599**	**956**
U.S.	**(290)**	**2,544**	**2,254**
Non-U.S.	**8**	**(64)**	**(56)**
Total other interest-bearing liabilities	**(282)**	**2,480**	**2,198**
Change in interest expense	**688**	**5,043**	**5,731**
Change in net interest income	**$ 966**	**$ (131)**	**$ 835**

	Year Ended December 2017 versus December 2016		
	Increase (decrease) due to change in:		
$ in millions	Volume	Rate	Net Change
Interest-earning assets			
U.S.	$ (60)	$ 438	$ 378
Non-U.S.	13	(24)	(11)
Total deposits with banks	(47)	414	367
U.S.	(151)	1,125	974
Non-U.S.	10	(14)	(4)
Total collateralized agreements	(141)	1,111	970
U.S.	375	(179)	196
Non-U.S.	172	92	264
Total financial instruments owned	547	(87)	460
U.S.	347	419	766
Non-U.S.	10	59	69
Total loans receivable	357	478	835
U.S.	117	492	609
Non-U.S.	99	82	181
Total other interest-earning assets	216	574	790
Change in interest income	932	2,490	3,422
Interest-bearing liabilities			
U.S.	46	379	425
Non-U.S.	49	28	77
Total interest-bearing deposits	95	407	502
U.S.	55	355	410
Non-U.S.	23	(12)	11
Total collateralized financings	78	343	421
U.S.	(37)	112	75
Non-U.S.	97	(35)	62
Total financial instruments sold, but not yet purchased	60	77	137
U.S.	(87)	346	259
Non-U.S.	(1)	(6)	(7)
Total short-term borrowings	(88)	340	252
U.S.	381	(17)	364
Non-U.S.	18	(25)	(7)
Total long-term borrowings	399	(42)	357
U.S.	(83)	1,732	1,649
Non-U.S.	5	(246)	(241)
Total other interest-bearing liabilities	(78)	1,486	1,408
Change in interest expense	466	2,611	3,077
Change in net interest income	$ 466	$ (121)	$ 345

Deposits

The table below presents information about interest-bearing deposits.

	Year Ended December		
$ in millions	**2018**	2017	2016
Average balances			
U.S.			
Savings and demand	**$ 76,428**	$ 68,819	$ 59,357
Time	**40,693**	32,290	37,898
Total U.S.	**117,121**	101,109	97,255
Non-U.S.			
Demand	**9,579**	8,443	8,041
Time	**20,492**	15,913	9,564
Total non-U.S.	**30,071**	24,356	17,605
Total	**$147,192**	$125,465	$114,860
Average interest rates			
U.S.			
Savings and demand	**1.85%**	0.98%	0.56%
Time	**2.21%**	1.64%	1.18%
Total U.S.	**1.98%**	1.19%	0.80%
Non-U.S.			
Demand	**1.29%**	0.68%	0.29%
Time	**0.81%**	0.75%	0.78%
Total non-U.S.	**0.96%**	0.72%	0.56%
Total	**1.77%**	1.10%	0.76%

In the table above, deposits are classified as U.S. and non-U.S. based on the location of the entity in which such deposits are held.

As of December 2018, deposits in U.S. offices included $6.79 billion and non-U.S. offices included $17.12 billion of time deposits that were greater than $100,000.

The table below presents maturities of these time deposits held in U.S. offices.

$ in millions	**As of December 2018**
3 months or less	**$1,137**
3 to 6 months	**1,306**
6 to 12 months	**3,047**
Greater than 12 months	**1,302**
Total	**$6,792**

Short-Term and Other Borrowed Funds

The table below presents information about securities loaned and repurchase agreements, and short-term borrowings.

	As of December		
$ in millions	**2018**	2017	2016
Securities loaned and repurchase agreements			
Amounts outstanding at year-end	**$ 90,531**	$ 99,511	$79,340
Average outstanding during the year	**$104,876**	$ 95,643	$84,324
Maximum month-end outstanding	**$123,805**	$103,359	$89,142
Weighted average interest rate			
During the year	**1.96%**	0.90%	0.52%
At year-end	**3.31%**	1.16%	0.44%
Short-term borrowings			
Amounts outstanding at year-end	**$ 50,057**	$ 61,818	$52,383
Average outstanding during the year	**$ 57,269**	$ 51,933	$57,340
Maximum month-end outstanding	**$ 63,743**	$ 61,818	$61,840
Weighted average interest rate			
During the year	**1.21%**	1.34%	0.78%
At year-end	**1.30%**	1.22%	0.94%

In the table above:

- These borrowings generally mature within one year of the financial statement date and include borrowings that are redeemable at the option of the holder within one year of the financial statement date.
- Amounts outstanding at year-end for short-term borrowings included short-term secured financings of $9.56 billion as of December 2018, $14.90 billion as of December 2017 and $13.12 billion as of December 2016.
- The weighted average interest rates for these borrowings include the effect of hedging activities.

Loan Portfolio

The table below presents information about loans receivable.

	As of December				
$ in millions	**2018**	2017	2016	2015	2014
U.S.					
Corporate loans	**$34,256**	$28,622	$23,821	$19,909	$14,020
PWM loans	**15,100**	14,489	12,386	12,824	10,989
Commercial real estate loans	**9,476**	6,150	2,813	3,186	1,876
Residential real estate loans	**7,244**	6,176	3,777	2,187	311
Consumer loans	**4,536**	1,912	208	–	–
Other loans	**3,616**	3,233	2,664	3,495	821
Total U.S.	**74,228**	60,582	45,669	41,601	28,017
Non-U.S.					
Corporate loans	**3,027**	2,127	1,016	831	290
PWM loans	**2,119**	2,102	1,442	1,137	300
Commercial real estate loans	**1,965**	1,837	1,948	2,085	549
Residential real estate loans	**40**	58	88	129	10
Other loans	**277**	30	18	38	–
Total non-U.S.	**7,428**	6,154	4,512	4,220	1,149
Total loans receivable, gross	**81,656**	66,736	50,181	45,821	29,166
Allowance for loan losses					
U.S.	**848**	604	476	381	205
Non-U.S.	**218**	199	33	33	23
Total allowance for loan losses	**1,066**	803	509	414	228
Total loans receivable	**$80,590**	$65,933	$49,672	$45,407	$28,938

In the table above, loans receivable are classified as U.S. and non-U.S. based on the location of the entity in which such loans are held.

Allowance for Loan Losses

The table below presents changes in the allowance for loan losses.

	Year Ended December				
$ in millions	**2018**	2017	2016	2015	2014
Beginning balance	**$ 803**	$ 509	$414	$228	$139
Net charge-offs	**(337)**	(203)	(8)	(1)	(3)
Provision	**654**	574	138	187	92
Other	**(54)**	(77)	(35)	–	–
Ending balance	**$1,066**	$ 803	$509	$414	$228

In the table above:

- Allowance for loan losses as of 2018 primarily related to corporate loans and consumer loans that were held in entities located in the U.S.
- Allowance for loan losses as of 2017 and earlier primarily related to corporate loans and loans extended to PWM clients that were held in entities located in the U.S.
- Net charge-offs for 2018 were primarily related to consumer loans held in entities located in the U.S. and commercial real estate PCI loans held in entities located outside of the U.S.
- Net charge-offs for 2017 and earlier were primarily related to corporate loans held in entities located in the U.S.

Maturities and Sensitivity to Changes in Interest Rates

The table below presents gross loans receivable by tenor and a distribution of such loans receivable between fixed and floating interest rates.

	Maturities and Sensitivity to Changes in Interest Rates as of December 2018			
$ in millions	Less than 1 year	1 - 5 years	Greater than 5 years	Total
U.S.				
Corporate loans	**$ 4,241**	**$24,907**	**$ 5,108**	**$34,256**
PWM loans	**12,172**	**2,910**	**18**	**15,100**
Commercial real estate loans	**1,458**	**7,368**	**650**	**9,476**
Residential real estate loans	**2,249**	**1,972**	**3,023**	**7,244**
Consumer loans	**51**	**4,059**	**426**	**4,536**
Other loans	**435**	**2,403**	**778**	**3,616**
Total U.S.	**20,606**	**43,619**	**10,003**	**74,228**
Non-U.S.				
Corporate loans	**263**	**2,236**	**528**	**3,027**
PWM loans	**2,082**	**37**	**–**	**2,119**
Commercial real estate loans	**483**	**1,476**	**6**	**1,965**
Residential real estate loans	**9**	**30**	**1**	**40**
Other loans	**2**	**255**	**20**	**277**
Total non-U.S.	**2,839**	**4,034**	**555**	**7,428**
Total loans receivable, gross	**$23,445**	**$47,653**	**$10,558**	**$81,656**
Loans at fixed interest rates	**$ 240**	**$ 4,769**	**$ 3,030**	**$ 8,039**
Loans at variable interest rates	**23,205**	**42,884**	**7,528**	**73,617**
Total	**$23,445**	**$47,653**	**$10,558**	**$81,656**

Cross-border Outstandings

Cross-border outstandings are based on the Federal Financial Institutions Examination Council's (FFIEC) guidelines for reporting cross-border information and represent the amounts that the firm may not be able to obtain from a foreign country due to country-specific events, including unfavorable economic and political conditions, economic and social instability, and changes in government policies.

Credit exposure represents the potential for loss due to the default or deterioration in credit quality of a counterparty or an issuer of securities or other instruments the firm holds and is measured based on the potential loss in an event of non-payment by a counterparty. Credit exposure is reduced through the effect of risk mitigants, such as netting agreements with counterparties that permit the firm to offset receivables and payables with such counterparties or obtaining collateral from counterparties. The table below does not include all the effects of such risk mitigants and does not represent the firm's credit exposure.

The table below presents cross-border outstandings and commitments for each country in which cross-border outstandings exceed 0.75% of consolidated assets in accordance with the FFIEC guidelines.

$ in millions	Banks	Governments	Other	Total	Commitments
As of December 2018					
Germany	**$2,028**	**$43,730**	**$ 4,755**	**$50,513**	**$ 3,834**
Cayman Islands	**$ 27**	**$ 2**	**$47,595**	**$47,624**	**$ 4,207**
France	**$1,193**	**$ 5,094**	**$11,549**	**$17,836**	**$10,307**
Japan	**$9,106**	**$ 1,686**	**$ 6,146**	**$16,938**	**$12,553**
Ireland	**$ 146**	**$ 55**	**$12,390**	**$12,591**	**$ 822**
Canada	**$2,383**	**$ 470**	**$ 7,845**	**$10,698**	**$ 1,513**
Luxembourg	**$ 22**	**$ 41**	**$ 9,799**	**$ 9,862**	**$ 2,838**
U.K.	**$1,101**	**$ 77**	**$ 8,458**	**$ 9,636**	**$20,336**
China	**$1,952**	**$ 66**	**$ 6,882**	**$ 8,900**	**$ 271**
South Korea	**$ 162**	**$ 2,935**	**$ 3,989**	**$ 7,086**	**$ 10**
As of December 2017					
Cayman Islands	$ 6	$ –	$34,624	$34,630	$ 4,940
Germany	$4,241	$22,765	$ 6,916	$33,922	$ 7,015
France	$3,569	$ 1,574	$19,048	$24,191	$14,549
Canada	$2,562	$ 311	$17,358	$20,231	$ 2,388
Japan	$8,827	$ 69	$ 7,220	$16,116	$18,079
Ireland	$ 143	$ 65	$11,490	$11,698	$ 895
China	$2,550	$ 687	$ 7,838	$11,075	$ –
Italy	$2,306	$ 3,986	$ 2,586	$ 8,878	$ 1,649
U.K.	$1,300	$ –	$ 7,480	$ 8,780	$14,966
Singapore	$ 372	$ 5,462	$ 1,873	$ 7,707	$ 48
Luxembourg	$ 59	$ 324	$ 7,320	$ 7,703	$ 2,438
As of December 2016					
Cayman Islands	$ 3	$ –	$34,756	$34,759	$ 2,519
France	$6,333	$ 1,858	$18,576	$26,767	$ 9,598
Germany	$3,183	$14,061	$ 9,250	$26,494	$ 7,281
Japan	$9,860	$ 721	$ 6,310	$16,891	$ 7,476
Italy	$3,220	$ 3,211	$ 1,608	$ 8,039	$ 1,228
Canada	$ 814	$ 333	$ 6,164	$ 7,311	$ 1,279
China	$1,189	$ 158	$ 5,662	$ 7,009	$ –
Singapore	$ 190	$ 6,165	$ 505	$ 6,860	$ 97
South Korea	$ 107	$ 3,563	$ 2,847	$ 6,517	$ 4

In the table above:

- Cross-border outstandings includes cash, receivables, collateralized agreements and cash financial instruments, but exclude derivative instruments.
- Collateralized agreements are presented gross, without reduction for related securities collateral held.
- Margin loans (included in receivables) are presented based on the amount of collateral advanced by the counterparty.
- Substantially all commitments consists of commitments to extend credit and forward starting collateralized agreements.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

There were no changes in or disagreements with accountants on accounting and financial disclosure during the last two years.

Item 9A. Controls and Procedures

As of the end of the period covered by this report, an evaluation was carried out by Goldman Sachs' management, with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act). Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective as of the end of the period covered by this report. In addition, no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) occurred during the fourth quarter of our year ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm are set forth in Part II, Item 8 of this Form 10-K.

Item 9B. Other Information

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information relating to our executive officers is included on page 20 of this Form 10-K. Information relating to our directors, including our audit committee and audit committee financial experts and the procedures by which shareholders can recommend director nominees, and our executive officers will be in our definitive Proxy Statement for our 2019 Annual Meeting of Shareholders, which will be filed within 120 days of the end of 2018 (2019 Proxy Statement) and is incorporated in this Form 10-K by reference. Information relating to our Code of Business Conduct and Ethics, which applies to our senior financial officers, is included in "Business — Available Information" in Part I, Item 1 of this Form 10-K.

Item 11. Executive Compensation

Information relating to our executive officer and director compensation and the compensation committee of the Board will be in the 2019 Proxy Statement and is incorporated in this Form 10-K by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information relating to security ownership of certain beneficial owners of our common stock and information relating to the security ownership of our management will be in the 2019 Proxy Statement and is incorporated in this Form 10-K by reference.

The table below presents information as of December 31, 2018 regarding securities to be issued pursuant to outstanding restricted stock units (RSUs) and securities remaining available for issuance under our equity compensation plans that were in effect during 2018.

Plan Category	Securities to be Issued Upon Exercise of Outstanding Options and Rights (a)	Weighted Average Exercise Price of Outstanding Options (b)	Securities Available For Future Issuance Under Equity Compensation Plans (c)
Equity compensation plans approved by security holders	**17,176,475**	**N/A**	**68,211,649**
Equity compensation plans not approved by security holders	**–**	**–**	**–**
Total	**17,176,475**		**68,211,649**

In the table above:

- Securities to be Issued Upon Exercise of Outstanding Options and Rights includes 17,176,475 shares that may be issued pursuant to outstanding RSUs. These awards are subject to vesting and other conditions to the extent set forth in the respective award agreements, and the underlying shares will be delivered net of any required tax withholding. As of December 31, 2018, there were no outstanding options.
- Shares underlying RSUs are deliverable without the payment of any consideration, and therefore these awards have not been taken into account in calculating the weighted average exercise price.

- Securities Available For Future Issuance Under Equity Compensation Plans represents shares remaining to be issued under our current stock incentive plan (SIP), excluding shares reflected in column (a). If any shares of common stock underlying awards granted under our current SIP, our SIP adopted in 2015 or our SIP adopted in 2013 are not delivered due to forfeiture, termination or cancellation or are surrendered or withheld, those shares will again become available to be delivered under our current SIP. Shares available for grant are also subject to adjustment for certain changes in corporate structure as permitted under our current SIP.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information regarding certain relationships and related transactions and director independence will be in the 2019 Proxy Statement and is incorporated in this Form 10-K by reference.

Item 14. Principal Accounting Fees and Services

Information regarding principal accounting fees and services will be in the 2019 Proxy Statement and is incorporated in this Form 10-K by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this Report:

1. Consolidated Financial Statements

The consolidated financial statements required to be filed in this Form 10-K are included in Part II, Item 8 hereof.

2. Exhibits

1.1 Second Amended and Restated Distribution Agreement, dated as of December 28, 2018, for Medium-Term Notes, Series N of The Goldman Sachs Group, Inc.

1.2 Form of Underwriting Agreement for Subordinated Debt Securities of The Goldman Sachs Group Inc., issued under the Subordinated Debt Indenture, dated as of February 20, 2004, between The Goldman Sachs Group, Inc., and The Bank of New York Mellon, as trustee.

1.3 Form of Underwriting Agreement for preferred stock and depositary shares of The Goldman Sachs Group, Inc.

2.1 Plan of Incorporation (incorporated by reference to Exhibit 2.1 to the Registrant's Registration Statement on Form S-1 (No. 333-74449)).

3.1 Restated Certificate of Incorporation of The Goldman Sachs Group, Inc., amended as of January 24, 2018 (incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017).

3.2 Amended and Restated By-Laws of The Goldman Sachs Group, Inc., amended as of February 18, 2016 (incorporated by reference to Exhibit 3.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2015).

4.1 Indenture, dated as of May 19, 1999, between The Goldman Sachs Group, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 6 to the Registrant's Registration Statement on Form 8-A, filed on June 29, 1999).

4.2 Subordinated Debt Indenture, dated as of February 20, 2004, between The Goldman Sachs Group, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 28, 2003).

4.3 Warrant Indenture, dated as of February 14, 2006, between The Goldman Sachs Group, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.34 to the Registrant's Post-Effective Amendment No. 3 to Form S-3, filed on March 1, 2006).

4.4 Senior Debt Indenture, dated as of December 4, 2007, among GS Finance Corp., as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.69 to the Registrant's Post-Effective Amendment No. 10 to Form S-3, filed on December 4, 2007).

4.5 Senior Debt Indenture, dated as of July 16, 2008, between The Goldman Sachs Group, Inc. and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.82 to the Registrant's Post-Effective Amendment No. 11 to Form S-3 (No. 333-130074), filed on July 17, 2008).

4.6 Fourth Supplemental Indenture, dated as of December 31, 2016, between The Goldman Sachs Group, Inc. and The Bank of New York Mellon, as trustee, with respect to the Senior Debt Indenture, dated as of July 16, 2008 (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on January 6, 2017).

4.7 Senior Debt Indenture, dated as of October 10, 2008, among GS Finance Corp., as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.70 to the Registrant's Registration Statement on Form S-3 (No. 333-154173), filed on October 10, 2008).

4.8 First Supplemental Indenture, dated as of February 20, 2015, among GS Finance Corp., as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York Mellon, as trustee, with respect to the Senior Debt Indenture, dated as of October 10, 2008 (incorporated by reference to Exhibit 4.7 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014).

4.9 Fourth Supplemental Indenture, dated as of August 21, 2018, among GS Finance Corp., as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York Mellon (incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2018).

4.10 Ninth Supplemental Subordinated Debt Indenture, dated as of May 20, 2015, between The Goldman Sachs Group, Inc. and The Bank of New York Mellon, as trustee, with respect to the Subordinated Debt Indenture, dated as of February 20, 2004 (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on May 22, 2015).

4.11 Tenth Supplemental Subordinated Debt Indenture, dated as of July 7, 2017, between The Goldman Sachs Group, Inc. and The Bank of New York Mellon, as trustee, with respect to the Subordinated Debt Indenture, dated as of February 20, 2004 (incorporated by reference to Exhibit 4.89 to the Registrant's Registration Statement on Form S-3 (No. 333-219206), filed on July 10, 2017).

Certain instruments defining the rights of holders of long-term debt securities of the Registrant and its subsidiaries are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Registrant hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

10.1 The Goldman Sachs Amended and Restated Stock Incentive Plan (2018). †

10.2 The Goldman Sachs Amended and Restated Restricted Partner Compensation Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended February 24, 2006). †

10.3 Form of Employment Agreement for Participating Managing Directors (applicable to executive officers) (incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)). †

10.4 Form of Agreement Relating to Noncompetition and Other Covenants (incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)). †

10.5 Tax Indemnification Agreement, dated as of May 7, 1999, by and among The Goldman Sachs Group, Inc. and various parties (incorporated by reference to Exhibit 10.25 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)).

10.6 Amended and Restated Shareholders' Agreement, effective as of January 15, 2015, among The Goldman Sachs Group, Inc. and various parties (incorporated by reference to Exhibit 10.6 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014).

10.7 Instrument of Indemnification (incorporated by reference to Exhibit 10.27 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)).

10.8 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.28 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 26, 1999).

10.9 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.44 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 26, 1999).

10.10 Form of Indemnification Agreement, dated as of July 5, 2000 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2000).

10.11 Amendment No. 1, dated as of September 5, 2000, to the Tax Indemnification Agreement, dated as of May 7, 1999 (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2000).

10.12 Letter, dated February 6, 2001, from The Goldman Sachs Group, Inc. to Mr. James A. Johnson (incorporated by reference to Exhibit 10.65 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 24, 2000). †

10.13 Letter, dated December 18, 2002, from The Goldman Sachs Group, Inc. to Mr. William W. George (incorporated by reference to Exhibit 10.39 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 29, 2002). †

10.14 Letter, dated December 19, 2018, from The Goldman Sachs Group, Inc. to Mr. Lloyd C. Blankfein (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on December 21, 2018). †

10.15 Form of Amendment, dated November 27, 2004, to Agreement Relating to Noncompetition and Other Covenants, dated May 7, 1999 (incorporated by reference to Exhibit 10.32 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 26, 2004). †

10.16 The Goldman Sachs Group, Inc. Non-Qualified Deferred Compensation Plan for U.S. Participating Managing Directors (terminated as of December 15, 2008) (incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 30, 2007). †

10.17 Form of Year-End Option Award Agreement (incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 28, 2008). †

10.18 Form of Non-Employee Director Option Award Agreement (incorporated by reference to Exhibit 10.34 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2009). †

10.19 Form of Non-Employee Director RSU Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.21 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.20 Ground Lease, dated August 23, 2005, between Battery Park City Authority d/b/a/ Hugh L. Carey Battery Park City Authority, as Landlord, and Goldman Sachs Headquarters LLC, as Tenant (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on August 26, 2005).

10.21 General Guarantee Agreement, dated January 30, 2006, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman Sachs & Co. LLC (incorporated by reference to Exhibit 10.45 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 25, 2005).

10.22 Goldman Sachs & Co. LLC Executive Life Insurance Policy and Certificate with Metropolitan Life Insurance Company for Participating Managing Directors (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2006). †

10.23 Form of Goldman Sachs & Co. LLC Executive Life Insurance Policy with Pacific Life & Annuity Company for Participating Managing Directors, including policy specifications and form of restriction on Policy Owner's Rights (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2006). †

10.24 Form of Second Amendment, dated November 25, 2006, to Agreement Relating to Noncompetition and Other Covenants, dated May 7, 1999, as amended effective November 27, 2004 (incorporated by reference to Exhibit 10.51 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 24, 2006). †

10.25 Description of PMD Retiree Medical Program. †

10.26 Letter, dated June 28, 2008, from The Goldman Sachs Group, Inc. to Mr. Lakshmi N. Mittal (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K, filed on June 30, 2008). †

10.27 General Guarantee Agreement, dated December 1, 2008, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman Sachs Bank USA (incorporated by reference to Exhibit 4.80 to the Registrant's Post-Effective Amendment No. 2 to Form S-3, filed on March 19, 2009).

10.28 Form of One-Time RSU Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.32 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.29 Amendments to Certain Non-Employee Director Equity Award Agreements (incorporated by reference to Exhibit 10.69 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 28, 2008). †

10.30 Form of Year-End RSU Award Agreement (not fully vested) (pre-2015) (incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.31 Form of Year-End RSU Award Agreement (fully vested) (pre-2015) (incorporated by reference to Exhibit 10.37 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.32 Form of Year-End RSU Award Agreement (Base and/or Supplemental) (pre-2015) (incorporated by reference to Exhibit 10.38 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.33 Form of Year-End Restricted Stock Award Agreement (fully vested) (pre-2015) (incorporated by reference to Exhibit 10.41 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2013). †

10.34 Form of Year-End Restricted Stock Award Agreement (Base and/or Supplemental) (pre-2015) (incorporated by reference to Exhibit 10.41 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.35 Form of Fixed Allowance RSU Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.43 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.36 Form of Deed of Gift (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2010). †

10.37 The Goldman Sachs Long-Term Performance Incentive Plan, dated December 17, 2010 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.38 Form of Performance-Based Restricted Stock Unit Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.39 Form of Performance-Based Option Award Agreement (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.40 Form of Performance-Based Cash Compensation Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.41 Amended and Restated General Guarantee Agreement, dated November 21, 2011, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman Sachs Bank USA (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on November 21, 2011).

10.42 Form of Aircraft Time Sharing Agreement (incorporated by reference to Exhibit 10.61 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2011). †

10.43 Description of Compensation Arrangements with Executive Officer (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2012). †

10.44 The Goldman Sachs Group, Inc. Clawback Policy, effective as of January 1, 2015 (incorporated by reference to Exhibit 10.53 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014).

10.45 Form of Non-Employee Director RSU Award Agreement. †

10.46 Form of One-Time RSU Award Agreement. †

10.47 Form of Year-End RSU Award Agreement (not fully vested). †

10.48 Form of Year-End RSU Award Agreement (fully vested). †

10.49 Form of Year-End RSU Award Agreement (Base (not fully vested) and/or Supplemental). †

10.50 Form of Year-End Short-Term RSU Award Agreement. †

10.51 Form of Year-End Restricted Stock Award Agreement (not fully vested) (incorporated by reference to Exhibit 10.52 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017). †

10.52 Form of Year-End Restricted Stock Award Agreement (fully vested) (incorporated by reference to Exhibit 10.53 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017). †

10.53 Form of Year-End Short-Term Restricted Stock Award Agreement (incorporated by reference to Exhibit 10.57 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2015). †

10.54 Form of Fixed Allowance RSU Award Agreement. †

10.55 Form of Fixed Allowance Restricted Stock Award Agreement. †

10.56 Form of Fixed Allowance Deferred Cash Award Agreement (incorporated by reference to Exhibit 10.59 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2015). †

10.57 Form of Performance-Based Restricted Stock Unit Award Agreement. †

10.58 Form of Performance-Based Cash Compensation Award Agreement (incorporated by reference to Exhibit 10.61 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2015). †

10.59 Form of Signature Card for Equity Awards. †

10.60 Amended and Restated General Guarantee Agreement, dated September 28, 2018, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman Sachs Bank USA (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on September 28, 2018).

10.61 Amended and Restated General Guarantee Agreement, dated September 28, 2018, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman Sachs & Co. LLC (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K, filed on September 28, 2018).

10.62 Lease, dated August 17, 2018, between Farringdon Street Partners Limited and Farringdon Street (Nominee) Limited, as Landlord, and Goldman Sachs International, as Tenant (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2018).

21.1 List of significant subsidiaries of The Goldman Sachs Group, Inc.

23.1 Consent of Independent Registered Public Accounting Firm.

31.1 Rule 13a-14(a) Certifications.

32.1 Section 1350 Certifications (This information is furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934).

99.1 Report of Independent Registered Public Accounting Firm on Selected Financial Data.

99.2 Debt and trust securities registered under Section 12(b) of the Exchange Act.

101 Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Statements of Earnings for the years ended December 31, 2018, December 31, 2017 and December 31, 2016, (ii) the Consolidated Statements of Comprehensive Income for the years ended December 31, 2018, December 31, 2017 and December 31, 2016, (iii) the Consolidated Statements of Financial Condition as of December 31, 2018 and December 31, 2017, (iv) the Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2018, December 31, 2017 and December 31, 2016, (v) the Consolidated Statements of Cash Flows for the years ended December 31, 2018, December 31, 2017 and December 31, 2016, and (vi) the notes to the Consolidated Financial Statements.

† This exhibit is a management contract or a compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

THE GOLDMAN SACHS GROUP, INC.

By:	/s/	Stephen M. Scherr
Name:		Stephen M. Scherr
Title:		Chief Financial Officer
Date:		February 25, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

By:	/s/	David M. Solomon
Name:		David M. Solomon
Capacity:		Director, Chairman and Chief Executive Officer (Principal Executive Officer)
Date:		February 25, 2019

By:	/s/	M. Michele Burns
Name:		M. Michele Burns
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Drew G. Faust
Name:		Drew G. Faust
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Mark A. Flaherty
Name:		Mark A. Flaherty
Capacity:		Director
Date:		February 25, 2019

By:	/s/	William W. George
Name:		William W. George
Capacity:		Director
Date:		February 25, 2019

By:	/s/	James A. Johnson
Name:		James A. Johnson
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Ellen J. Kullman
Name:		Ellen J. Kullman
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Lakshmi N. Mittal
Name:		Lakshmi N. Mittal
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Adebayo O. Ogunlesi
Name:		Adebayo O. Ogunlesi
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Peter Oppenheimer
Name:		Peter Oppenheimer
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Jan E. Tighe
Name:		Jan E. Tighe
Capacity:		Director
Date:		February 25, 2019

By:	/s/	David A. Viniar
Name:		David A. Viniar
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Mark O. Winkelman
Name:		Mark O. Winkelman
Capacity:		Director
Date:		February 25, 2019

By:	/s/	Stephen M. Scherr
Name:		Stephen M. Scherr
Capacity:		Chief Financial Officer (Principal Financial Officer)
Date:		February 25, 2019

By:	/s/	Brian J. Lee
Name:		Brian J. Lee
Capacity:		Principal Accounting Officer
Date:		February 25, 2019

Exhibit 1.1

EXECUTION VERSION

The Goldman Sachs Group, Inc.

Medium-Term Notes, Series N

Second Amended and Restated Distribution Agreement

December 28, 2018

Goldman Sachs & Co. LLC,
200 West Street,
New York, New York 10282.

Ladies and Gentlemen:

The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), proposes to issue and sell from time to time its Medium-Term Notes, Series N (the "Securities"), and agrees with each Agent as set forth in this Second Amended and Restated Distribution Agreement (this "Agreement") between the Company and Goldman Sachs & Co. LLC, formerly known as Goldman, Sachs & Co. ("GS&Co."), which amends and restates in its entirety the Amended and Restated Distribution Agreement dated July 10, 2017, between the Company and GS&Co. Each of the terms "the Agents", "such Agent", "any Agent", "an Agent", "each Agent", "the Purchasing Agent" and "the Selling Agent", when used in this Agreement or in any Terms Agreement (as defined below) or in the Annexes hereto, shall mean GS&Co. except at any time when more than one Agent is acting as such hereunder, as contemplated in Section 10 hereof.

The Company acknowledges and agrees that GS&Co. may use the Prospectus (as defined below) in connection with offers and sales of the Securities as contemplated in the Prospectus under the caption "Plan of Distribution — Market-Making Resales by Affiliates" ("Secondary Market Transactions"). The Company further acknowledges and agrees that GS&Co. is under no obligation to effect any Secondary Market Transactions and, if it does so, it may discontinue effecting such transactions at any time without providing any notice to the Company. The term "Agent", whenever used in this Agreement, shall include GS&Co., whether acting in its capacity as an Agent or acting in connection with a Secondary Market Transaction, except as may be specifically provided otherwise herein.

Subject to the terms and conditions stated herein and to the reservation by the Company of the right to sell Securities directly on its own behalf, the Company hereby (i) appoints each Agent as an agent of the Company for the purpose of soliciting and receiving offers to purchase Securities from the Company when and as instructed by the Company pursuant to Section 2(a) hereof and (ii) agrees that, except as otherwise contemplated herein, whenever it determines to sell Securities directly to any Agent as principal, it will enter into a separate agreement (each a "Terms Agreement"), substantially in the form of Annex I hereto or in such other form as may be agreed by the parties to that particular agreement, relating to such sale in accordance with Section 2(b) hereof. This Agreement shall not be construed to create either an obligation on the part of the Company to sell any Securities or an obligation of any of the Agents to purchase Securities as principal.

The Securities will be issued under a senior debt indenture, dated as of July 16, 2008 (as amended by the Fourth Supplemental Indenture thereto, dated December 31, 2016, and as it may be further amended or supplemented from time to time, the "2008 Indenture"), between the Company and The Bank of New York Mellon, as trustee (including any successor trustee thereunder, the "Trustee"). The Securities shall have the maturity ranges, interest rates, if any, redemption provisions and other terms set forth in the Prospectus referred to below as it may be amended or supplemented from time to time. The Securities will be issued, and the terms and rights thereof established, from time to time by the Company in accordance with the 2008 Indenture.

1. The Company represents and warrants to, and agrees with, each Agent that:

(a) An "automatic shelf registration statement" as defined under Rule 405 under the Securities Act of 1933, as amended (the "Act") on Form S-3 (File No. 333- 219206) in respect of the Securities has been filed with the Securities and Exchange Commission (the "Commission") not earlier than three years prior to the date hereof; such registration statement, and any post-effective amendment thereto, became effective on filing; and no stop order suspending the effectiveness of such registration statement or any part thereof has been issued and no proceeding for that purpose has been initiated or threatened by the Commission, and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act has been received by the Company (the base prospectus filed as part of such registration statement, in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the "Base Prospectus" (which term shall be deemed to refer to such other prospectus relating to the Securities that has superseded or replaced such base prospectus, as notified to the Agents by the Company)); any preliminary prospectus (including any preliminary prospectus supplement) relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of such registration statement, including all exhibits thereto but excluding all Forms T-1 and including any prospectus supplement relating to the Securities that is filed with the Commission and deemed by virtue of Rule 430B to be part of such registration statement, each as amended at the time such part of the registration statement became effective, are hereinafter collectively called the "Registration Statement"; the Base Prospectus, as supplemented by the prospectus supplement dated July 10, 2017 relating to the Securities, is hereinafter called the "Prospectus" (which term shall be deemed to refer to such other prospectus or prospectus supplement relating to the Securities that has superseded or replaced such documents, as notified to the Agents by the Company); any reference herein to the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Act, as of the date of such prospectus; any supplement to the Prospectus that sets forth only the terms of a particular issue of the Securities is hereinafter called a "Pricing Supplement"; any reference to any amendment or supplement to the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any post-effective amendment to the Registration Statement, any prospectus supplement relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act and any documents filed under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and incorporated therein, in each case after the date of the Base Prospectus, such Preliminary Prospectus, or the Prospectus, as the case may be; any reference to any amendment to the Registration Statement shall be deemed to refer to and include any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act after the

effective date of the Registration Statement that is incorporated by reference in the Registration Statement; any reference to the "Prospectus as amended or supplemented", other than in Section 1(c)(i) hereof, shall be deemed to refer to and include the Prospectus as amended or supplemented (including by the applicable Pricing Supplement filed in accordance with Section 4(a) hereof and any other prospectus supplement specifically referred to in such Pricing Supplement) in relation to the Securities to be sold pursuant to this Agreement, in the form filed or transmitted for filing with the Commission pursuant to Rule 424(b) under the Act and in accordance with Section 4(a) hereof, including any documents incorporated by reference therein as of the date of such filing;

(b) No order preventing or suspending the use of any Preliminary Prospectus or any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Securities (an "Issuer Free Writing Prospectus") has been issued by the Commission, and each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"), and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided, however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Agent through GS&Co. expressly for use therein;

(c) (i) With respect to any issue of Securities to be sold pursuant to a Terms Agreement, the "Applicable Time" will be such time on the date of such Terms Agreement as is specified therein as the Applicable Time, and the "Pricing Disclosure Package" will be the Prospectus as amended or supplemented at the Applicable Time together with (A) the information referenced in Schedule II(b) to such Terms Agreement and (B) such other documents, if any, as may be listed in Schedule II(a) to such Terms Agreement, taken together; (ii) with respect to each such issue of Securities, the Pricing Disclosure Package, as of the Applicable Time, will not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they are made, not misleading; and (iii) with respect to each such issue of Securities, each Issuer Free Writing Prospectus listed in Schedule II(a) to the applicable Terms Agreement, if any, will not conflict with the information contained in the Registration Statement, the Prospectus or the Prospectus as amended or supplemented and, taken together with the Pricing Disclosure Package as of the Applicable Time, will not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they are made, not misleading; *provided, however*, that the representations and warranties in clauses (ii) and (iii) of this Section 1(c) shall not apply to statements or omissions made in any Pricing Disclosure Package or Issuer Free Writing Prospectus in reliance upon and in conformity with information furnished in writing to the Company by any Agent expressly for use therein;

(d) The documents incorporated by reference in the Prospectus as amended or supplemented, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact

required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and any further documents so filed and incorporated by reference in the Prospectus, or any further amendment or supplement thereto, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder and will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they are made, not misleading; *provided, however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by any Agent expressly for use in the Prospectus as amended or supplemented relating to a particular issuance of Securities; and no such documents will be filed with the Commission after the Commission's close of business on the business day immediately prior to the date of the applicable Terms Agreement and prior to the date of execution of such Terms Agreement, except as set forth on Schedule II(c) to such Terms Agreement;

(e) The Registration Statement and the Prospectus conform, and any further amendments or supplements to the Registration Statement or the Prospectus will conform, in all material respects to the requirements of the Act and the Trust Indenture Act, as applicable, and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to the Registration Statement and any amendment thereto and as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; *provided*, *however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by any Agent expressly for use in the Prospectus as amended or supplemented to relate to a particular issuance of Securities;

(f) (i) Neither the Company nor any of its subsidiaries that are listed in the Company's latest Annual Report on Form 10-K pursuant to the requirements of Form 10-K and Item 601(b)(21) of the Commission's Regulation S-K and are "significant subsidiaries" as defined in Rule 1-02(w) of the Commission's Regulation S-X (the "Significant Subsidiaries") has sustained since the date of the latest audited financial statements included or incorporated by reference in the Prospectus as amended or supplemented any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Prospectus as amended or supplemented; and (ii) since the respective dates as of which information is given in the Registration Statement and the Prospectus as amended or supplemented, there has not been any material adverse change in the capital stock or long-term debt of the Company or any of its Significant Subsidiaries or any material adverse change, or any development involving a prospective material adverse change, in or affecting the general affairs, management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries, otherwise, in any such case described in clause (i) or (ii), than as set forth or contemplated in the Prospectus as amended or supplemented;

(g) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with power and authority (corporate and other) to own its properties and conduct its business as described in the Prospectus as amended or supplemented;

(h) The Company has an authorized capitalization as set forth in the Prospectus as amended or supplemented, and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable;

(i) The Securities have been duly authorized, and, when issued and delivered pursuant to this Agreement and any Terms Agreement, will have been duly executed, authenticated, issued and delivered and will constitute valid and legally binding obligations of the Company entitled to the benefits provided by the 2008 Indenture; the 2008 Indenture has been duly authorized and duly qualified under the Trust Indenture Act and constitutes a valid and legally binding instrument, enforceable in accordance with its terms, subject, as to enforcement, to bankruptcy, insolvency, reorganization and other laws of general applicability relating to or affecting creditors' rights and to general equity principles; and the 2008 Indenture conforms, and the Securities of any particular issuance of Securities will conform, to the descriptions thereof contained in the Prospectus as amended or supplemented to relate to such issuance of Securities;

(j) The issue and sale of the Securities, the compliance by the Company with all of the provisions of the Securities, the 2008 Indenture, this Agreement and any Terms Agreement and the consummation of the transactions contemplated herein and therein will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, nor will such action result in any violation of the provisions of the Restated Certificate of Incorporation or the Amended and Restated By-laws of the Company or any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the solicitation of offers to purchase Securities, the issue and sale of the Securities by the Company or the consummation by the Company of the other transactions contemplated by this Agreement, any Terms Agreement or the 2008 Indenture, except such as have been, or will have been prior to the Recommencement Date (as defined in Section 3 hereof), obtained under the Act or the Trust Indenture Act and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the solicitation by such Agent of offers to purchase Securities from the Company and with purchases of Securities by such Agent as principal, as the case may be, in each case in the manner contemplated hereby;

(k) Neither the Company nor any of its Significant Subsidiaries is in violation of its organizational documents or in default in the performance or observance of any material obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound;

(l) The statements set forth in the Prospectus as amended or supplemented under the captions “Description of Notes We May Offer”, “Description of Debt Securities We May Offer” and “Legal Ownership and Book-Entry Issuance”, insofar as they purport to constitute a summary of the terms of the Securities, and under the captions “United States Taxation” and “Plan of Distribution”, insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair;

(m) Other than as set forth in the Prospectus as amended or supplemented, there are no legal or governmental proceedings pending to which the Company or any of its subsidiaries is a party or of which any property of the Company or any of its subsidiaries is the subject, which, if determined adversely to the Company or any of its subsidiaries, would individually or in the aggregate have a material adverse effect on the current or future consolidated financial position, stockholders’ equity or results of operations of the Company and its subsidiaries, and, to the best of the Company’s knowledge, no such proceedings are threatened or contemplated by governmental authorities or threatened by others;

(n) The Company is not and, after giving effect to each offering and sale of the Securities and the application of the proceeds thereof, will not be an “investment company”, as such term is defined in the Investment Company Act of 1940, as amended (the “Investment Company Act”);

(o) (i) (A) At the time of filing the Registration Statement, (B) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus) and (C) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Act) made any offer relating to the Securities in reliance on the exemption of Rule 163 under the Act, the Company was a “well-known seasoned issuer” as defined in Rule 405 under the Act; and (ii) at the earliest time after the filing of the Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Securities, the Company was not an “ineligible issuer” as defined in Rule 405 under the Act;

(p) The Company and its Significant Subsidiaries possess all authorizations issued by the appropriate Federal, state and foreign governments, governmental or regulatory authorities, self-regulatory organizations and all courts or other tribunals, and are members in good standing of each Federal, state or foreign exchange, board of trade, clearing house or association and self-regulatory or similar organization necessary to conduct their respective businesses as described in the Prospectus as amended or supplemented, except as would not, individually or in the aggregate, have a material adverse effect on the prospects, financial position, stockholders’ equity or results of operations of the Company and its subsidiaries;

(q) PricewaterhouseCoopers LLP, who certified certain consolidated financial statements of the Company and its subsidiaries, and audited the Company’s internal control over financial reporting, is an independent registered public accounting firm as required by the Act and the rules and regulations of the Commission thereunder;

(r) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies with the requirements of the Exchange Act and has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Except as disclosed in the Prospectus as amended or supplemented, the Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting;

(s) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(t) Since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus, there has been no change in the Company's internal control over financial reporting that has materially adversely affected, or is reasonably likely to materially adversely affect, the Company's internal control over financial reporting;

(u) The Company has implemented an anti-bribery program including policies and procedures reasonably designed to ensure compliance with applicable law, including without limitation the Foreign Corrupt Practices Act of 1977 and the Bribery Act 2010 of the United Kingdom, and will maintain such program, as modified from time to time, during the term of this Agreement. The Company will not use the proceeds of the offering of the Securities hereunder in a manner that will violate applicable anti-bribery laws;

(v) The Company has developed and implemented written policies, procedures and internal controls reasonably designed to ensure compliance with applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT Act of 2001, and the regulations promulgated thereunder, and the anti-money laundering laws of the various jurisdictions in which the Company and its regulated subsidiaries conduct business; and

(w) The Company has developed and implemented written policies, procedures and internal controls reasonably designed to ensure compliance with any economic sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), or other relevant economic sanctions authority (collectively, "Sanctions"), and the Company will not use the proceeds of the offering of the Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions (except as may be authorized by the relevant economic sanctions authority) or (ii) in any other manner that will result in a violation of Sanctions by the Company.

2. (a) On the basis of the representations and warranties herein contained, and subject to the terms and conditions herein set forth, each of the Agents hereby severally and not jointly agrees, upon receipt of instructions from the Company, to act as agent of the Company and to use its reasonable efforts to solicit and receive offers to purchase a particular Security or Securities from the Company upon the terms and conditions set forth in the Prospectus as amended or supplemented from time to time. Each Agent shall solicit offers to purchase only Securities having such terms, and shall solicit such offers only during such periods, as the Company shall instruct such Agent. So long as this Agreement shall remain in effect with respect to any Agent, the Company shall not, without the consent of such Agent, solicit or accept offers to purchase, or sell, any debt securities with a maturity at the time of original issuance of 18 months or more except pursuant to this Agreement or any Terms Agreement, or except in an offering of Securities that are not and are not required to be registered under the Act or except in connection with a firm commitment underwriting pursuant to an underwriting agreement that does not provide for a continuous offering of medium-term debt securities (other than in Secondary Market Transactions). However, the Company reserves the right to sell, and may solicit and accept offers to purchase, Securities directly on its own behalf in transactions with persons other than broker-dealers, and, in the case of any such sale not resulting from a solicitation made by any Agent, no commission will be payable with respect to such sale. These provisions shall not limit Section 4(f) hereof or any similar provision included in any Terms Agreement.

Procedural details relating to the issue and delivery of Securities, the solicitation of offers to purchase Securities and the payment in each case therefor shall be as set forth in the Administrative Procedure attached hereto as Annex II as it may be amended from time to time by written agreement between the Agents and the Company (the "Administrative Procedure"). The provisions of the Administrative Procedure shall apply to all transactions contemplated hereunder other than those made pursuant to a Terms Agreement. Each Agent and the Company agree to perform the respective duties and obligations specifically provided to be performed by each of them in the Administrative Procedure. The Company will furnish to the Trustee a copy of the Administrative Procedure as from time to time in effect.

The Company reserves the right, in its sole discretion, at any time when the Company has instructed any Agent to solicit offers to purchase the Securities, to instruct such Agent to suspend, for any period of time or permanently, the solicitation of offers to purchase the Securities. As soon as practicable, but in any event not later than one business day in New York City, after receipt of notice from the Company, such Agent will suspend solicitation of offers to purchase Securities from the Company until such time as the Company has instructed such Agent to resume such solicitation. During such period, the Company shall not be required to comply with the provisions of Sections 4(h), 4(i) and 4(j) with regard to such Agent. Upon advising such Agent that such solicitation may be resumed, however, the Company shall simultaneously provide the documents (if any) required to be delivered by Sections 4(h), 4(i) and 4(j), and such Agent shall have no obligation to solicit offers to purchase the Securities until such documents have been received by such Agent. In addition, any failure by the Company to comply with its obligations hereunder, including its obligations to deliver the documents required by Sections 4(h), 4(i) and 4(j), with regard to any Agent shall automatically terminate such Agent's obligations hereunder, including its obligations to solicit offers to purchase the Securities hereunder as agent or to purchase Securities hereunder as principal.

The Company agrees to pay each Agent a commission, at the time of settlement of any sale of a Security by the Company as a result of a solicitation made by such Agent, in an amount equal to the following applicable percentage of the principal amount of such Security sold or in an amount as agreed between the Agent and the Company:

Range of Maturities	Commission (percentage of aggregate principal amount of Securities sold)
Less than 1 year	.050%
From 1 year to less than 1½ years	.100%
From 1½ years to less than 2 years	.150%
From 2 years to less than 3 years	.175%
From 3 years to less than 4 years	.250%
From 4 years to less than 5 years	.300%
From 5 years to less than 6 years	.350%
From 6 years to less than 7 years	.375%
From 7 years to less than 10 years	.400%
From 10 years to less than 12 years	.450%
From 12 years to less than 15 years	.475%
From 15 years to less than 20 years	.550%
From 20 years to less than 30 years	.600%
From 30 years to less than 40 years	.750%
40 years and more	.900%

(b) Each sale of Securities by the Company to any Agent as principal shall be made in accordance with the terms of this Agreement and (unless the Company and such Agent shall otherwise agree) a Terms Agreement which will provide for the sale of such Securities by the Company to, and the purchase thereof by, such Agent; a Terms Agreement may also specify certain provisions relating to the reoffering of such Securities by such Agent; the commitment of any Agent to purchase Securities as principal, whether pursuant to any Terms Agreement or otherwise, shall be deemed to have been made on the basis of the representations and warranties of the Company herein contained and shall be subject to the terms and conditions herein set forth; each Terms Agreement shall specify the principal amount of Securities to be purchased by any Agent pursuant thereto, the price to be paid to the Company for such Securities, any provisions relating to rights of, and default by,

underwriters acting together with such Agent in the reoffering of the Securities and the time and date and place of delivery of and payment for such Securities; such Terms Agreement shall also specify any requirements for opinions of counsel, accountants' letters and officers' certificates pursuant to Section 4 hereof and such Terms Agreement may also include such other provisions (including provisions that modify this Agreement insofar as it sets forth the agreement between the Company and such Agent) as the Company and such Agent may agree upon. Unless otherwise specified in a Terms Agreement, each Agent proposes to offer Securities purchased by it as principal from the Company for sale at prevailing market prices or prices related thereto at the time of sale, which may be equal to, greater than or less than the price at which such Securities are purchased by such Agent from the Company.

For each sale of Securities by the Company to an Agent as principal that is not made pursuant to a Terms Agreement, the procedural details relating to the issue and delivery of such Securities and payment therefor shall be as set forth in the Administrative Procedure. For each such sale of Securities by the Company to an Agent as principal that is not made pursuant to a Terms Agreement, the Company agrees to pay such Agent a commission (or grant an equivalent discount) as provided in Section 2(a) hereof and in accordance with the schedule set forth therein (or in such amount as may be agreed between such Agent and the Company).

Each time and date of delivery of and payment for Securities to be purchased from the Company by an Agent as principal, whether set forth in a Terms Agreement or in accordance with the Administrative Procedure, is referred to herein as a "Time of Delivery".

(c) Each Agent agrees, with respect to any Security denominated in a currency other than U.S. dollars, and whether acting as agent, as principal under any Terms Agreement or otherwise (including, in the case of GS&Co., in any Secondary Market Transaction), not to solicit offers to purchase or otherwise offer, sell or deliver such Security, directly or indirectly, in, or to residents of, the country issuing such currency, except as permitted by applicable law.

(d) Each Agent shall ensure that payments in respect of the Securities for the benefit of a holder of Securities are not subject to withholding under Sections 1471 through 1474 of the U.S. Internal Revenue Code of 1986 (or any regulations or guidance thereunder or any agreements entered into in respect thereof) as a result of such Agent (or any affiliated party through which the holder holds Securities) being subject to such withholding on the payment.

3. The documents required to be delivered pursuant to Section 6 hereof on the Recommencement Date (as defined below) shall be delivered to the Agents at the offices of Sullivan & Cromwell LLP, 125 Broad Street, New York, New York 10004, at 11:00 a.m., New York City time, on the date of this Agreement, which date and time of such delivery may be postponed by agreement between the Agents and the Company but in no event shall be later than the day prior to the date on which solicitation of offers to purchase Securities is commenced or on which any Terms Agreement is executed (such time and date being referred to herein as the "Recommencement Date").

4. The Company covenants and agrees with each Agent:

(a) (i) To make no amendment or supplement to the Registration Statement or the Prospectus (A) prior to the Recommencement Date which shall be disapproved by any Agent promptly after reasonable notice thereof, (B) after the date of any Terms Agreement or other agreement by an Agent to purchase Securities as principal and prior to the related Time of Delivery which shall be disapproved by any Agent party to such Terms Agreement or so purchasing as principal promptly after reasonable notice thereof or (C) during the period beginning on the Recommencement Date and continuing for as long as may be required under applicable law, in the reasonable judgment of GS&Co. after consultation with the Company, in order to offer and sell any Securities in Secondary Market Transactions as contemplated by the Prospectus (the "Secondary Transactions Period") which shall be disapproved by GS&Co. promptly after reasonable notice thereof;

(ii) to prepare, with respect to any Securities to be sold by the Company through or to such Agent pursuant to this Agreement, a Pricing Supplement with respect to such Securities in a form previously approved by such Agent and to file such Pricing Supplement pursuant to Rule 424(b)(2) under the Act not later than the close of business of the Commission on the second business day after the date on which such Pricing Supplement is first used;

(iii) to make no amendment or supplement to the Registration Statement or Prospectus, other than any Pricing Supplement, at any time prior to having afforded each Agent a reasonable opportunity to review and comment thereon;

(iv) with respect to any issue of Securities to be sold pursuant to a Terms Agreement, but only if requested by the Agents party to such Terms Agreement prior to the Applicable Time, to prepare a final term sheet relating to such Securities in the form set forth in Schedule III to such Terms Agreement and to file such term sheet pursuant to Rule 433(d) under the Act within the time required by such rule;

(v) to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act;

(vi) to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required in connection with the offering or sale of the Securities (including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period), and during such same period to advise such Agent, promptly after the Company receives notice thereof, of the time when any amendment to the Registration Statement has been filed or has become effective or any supplement to the Prospectus or any amended Prospectus (other than any Pricing Supplement that relates to Securities not purchased through or by such Agent) has been filed with the Commission, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Securities, of any notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act relating to the Securities, of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amendment or supplement of the Registration Statement or Prospectus or for additional information;

(vii) in the event of the issuance of any such stop order or of any such order preventing or suspending the use of any such prospectus or suspending any such qualification, to use promptly its best efforts to obtain its withdrawal; and

(b) If required by Rule 430B(h) under the Act, to prepare a form of prospectus in a form approved by GS&Co. and to file such form of prospectus pursuant to Rule 424(b) under the Act not later than may be required by Rule 424(b) under the Act; and to make no further amendment or supplement to such form of prospectus which shall be disapproved by GS&Co. promptly after reasonable notice thereof;

(c) If by the third anniversary (the "Renewal Deadline") of the initial effective date of the Registration Statement, any of the Securities remain unsold by the Agents, the Company will file, if it has not already done so and is eligible to do so, a new automatic shelf registration statement relating to the Securities, in a form satisfactory to you. If at the Renewal Deadline the Company is no longer eligible to file an automatic shelf registration statement, the Company will, if it has not already done so, file a new shelf registration statement relating to the Securities, in a form satisfactory to you and will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the public offering and sale of the Securities to continue as contemplated in the expired registration statement relating to the Securities. References herein to the Registration Statement shall include such new automatic shelf registration statement or such new shelf registration statement, as the case may be;

(d) Promptly from time to time to take such action as such Agent may reasonably request to qualify the Securities for offering and sale under the securities laws of such jurisdictions as such Agent may request and to comply with such laws so as to permit the continuance of sales and dealings therein for as long as may be necessary to complete the distribution or sale of the Securities (including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period); *provided*, *however*, that in connection therewith the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction;

(e) (i) To furnish such Agent with copies of the Registration Statement and each amendment thereto and with copies of the Prospectus as each time amended or supplemented, other than any Pricing Supplement (except as provided in the Administrative Procedure), in the form in which it is filed with the Commission pursuant to Rule 424 under the Act, and with copies of the documents incorporated by reference therein, all in such quantities as such Agent may reasonably request from time to time;

(ii) if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the applicable Pricing Supplement in connection with the offering or sale of the Securities (including Securities purchased from the Company by such Agent as principal and including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period, whether before or after such

expiration) and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Act, the Exchange Act or the Trust Indenture Act, to notify such Agent and request such Agent, in its capacity as agent of the Company, to suspend solicitation of offers to purchase Securities from the Company (and, if so notified, such Agent shall cease such solicitations as soon as practicable, but in any event not later than one business day in New York City later); and if the Company shall decide to amend or supplement the Registration Statement or the Prospectus as then amended or supplemented, to so advise such Agent promptly by telephone (with confirmation in writing) and to prepare and cause to be filed promptly with the Commission an amendment or supplement to the Registration Statement or the Prospectus as then amended or supplemented that will correct such statement or omission or effect such compliance;

(iii) notwithstanding paragraph (ii) above, if during the period specified in such paragraph such Agent continues to own Securities purchased from the Company by such Agent as principal or such Agent is otherwise required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in respect of transactions in the Securities (including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period), to promptly prepare and file with the Commission such an amendment or supplement and furnish without charge to such Agent as many copies as it may from time to time during such period reasonably request of such amendment or supplement; *provided*, *however*, that the Company may elect, upon notice to GS&Co., not to comply with this paragraph (iii) with respect to any Secondary Market Transaction, but only for a period or periods that the Company reasonably determines are necessary in order to avoid premature disclosure of material, non-public information, unless, notwithstanding such election, such disclosure would otherwise be required under this Agreement; and *provided*, *further*, that no such period or periods described in the preceding proviso shall exceed 90 days in the aggregate during any period of 12 consecutive calendar months. Upon receipt of any such notice, GS&Co. shall cease using the Prospectus or any amendment or supplement thereto in connection with Secondary Market Transactions until it receives notice from the Company that it may resume using such document (or such document as it may be amended or supplemented);

(f) To make generally available to its securityholders as soon as practicable, but in any event not later than 16 months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158 under the Act);

(g) To pay the required Commission filing fees relating to the Securities within the time required by Rule 456(b)(1) under the Act without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) under the Act;

(h) So long as any Securities are outstanding, to furnish to such Agent copies of all reports or other communications (financial or other) furnished to stockholders generally, and to deliver to such Agent (i) as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; and (ii) such additional information concerning the business and financial condition of the Company as such Agent may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company and its subsidiaries are consolidated in reports furnished to its stockholders generally or to the Commission);

(i) That, from the date of any Terms Agreement with such Agent or other agreement by such Agent to purchase Securities as principal and continuing to and including the later of (i) the termination of the trading restrictions for the Securities purchased thereunder, as notified to the Company by such Agent, and (ii) the related Time of Delivery, the Company will not, without the prior written consent of such Agent, offer, sell, contract to sell or otherwise dispose of any debt securities of the Company which both mature more than 18 months after such Time of Delivery and are substantially similar to the Securities except pursuant to this Agreement or any Terms Agreement, or except in an offering of Securities that are not and are not required to be registered under the Act or except in connection with a firm commitment underwriting pursuant to an underwriting agreement that does not provide for a continuous offering of medium-term debt securities (other than in Secondary Market Transactions);

(j) That each acceptance by the Company of an offer to purchase Securities hereunder (including any purchase from the Company by such Agent as principal not pursuant to a Terms Agreement), and each execution and delivery by the Company of a Terms Agreement with such Agent, shall be deemed to be an affirmation to such Agent that the representations and warranties of the Company contained in or made pursuant to this Agreement are true and correct as of the date of such acceptance or of such Terms Agreement, as the case may be, as though made at and as of such date, and an undertaking that such representations and warranties will be true and correct as of the settlement date for the Securities relating to such acceptance or as of the Time of Delivery relating to such sale, as the case may be, as though made at and as of such date (except that such representations and warranties shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented relating to such Securities);

(k) That reasonably in advance of each time any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act is incorporated by reference into the Prospectus and each time the Company sells Securities to such Agent as principal pursuant to a Terms Agreement and such Terms Agreement specifies the delivery of an opinion or opinions by Sullivan & Cromwell LLP as a condition to the purchase of Securities pursuant to such Terms Agreement, the Company shall furnish to such counsel such papers and information as they may reasonably request to enable them to furnish to such Agent the opinion or opinions referred to in Section 6(b) hereof;

(l) That reasonably promptly after each time any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act is incorporated by reference into the Prospectus, and each time the Company sells Securities to such Agent as principal pursuant to a Terms Agreement and such Terms Agreement specifies the delivery of a letter under this Section 4(l) as a condition to the purchase of Securities pursuant to such Terms Agreement, the Company shall cause the independent registered public accounting firm who audited the financial statements of the Company and its subsidiaries included or incorporated by reference in the Registration Statement forthwith to furnish such Agent a letter, dated the date of such amendment, supplement or incorporation or the Time of Delivery relating to such sale, as the case may be, in form satisfactory to such Agent, of the same tenor as the letter referred to in Section 6(d) hereof but modified to relate to the Registration Statement and the Prospectus as amended or supplemented to the date of such letter, with such changes as may be necessary to reflect changes in the financial statements and other information derived from the accounting records of the Company, to the extent such financial statements and other information are available as of a date not more than five business days prior to the date of such letter; *provided*, *however*, that, with respect to any financial information or other matter, such letter may reconfirm as true and correct at such date as though made at and as of such date, rather than repeat, statements with respect to such financial information or other matter made in the letter referred to in Section 6(d) hereof which was last furnished to such Agent;

(m) That reasonably promptly after each time any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act is incorporated by reference into the Prospectus and each time the Company sells Securities to such Agent as principal and the applicable Terms Agreement specifies the delivery of a certificate under this Section 4(m) as a condition to the purchase of Securities pursuant to such Terms Agreement, the Company shall furnish or cause to be furnished forthwith to such Agent a certificate, dated the date of such supplement, amendment or incorporation or the Time of Delivery relating to such sale, as the case may be, in such form and executed by such officers of the Company as shall be satisfactory to such Agent, to the effect that the statements contained in the certificate referred to in Section 6(i) hereof which was last furnished to such Agent are true and correct at such date as though made at and as of such date (except that such statements shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented to such date), or, in lieu of such certificate, a certificate of the same tenor as the certificates referred to in said Section 6(i) but modified to relate to the Registration Statement and the Prospectus as amended and supplemented to such date;

(n) To offer to any person who has agreed to purchase Securities from the Company as the result of an offer to purchase solicited by such Agent the right to refuse to purchase and pay for such Securities if, on the related settlement date fixed pursuant to the Administrative Procedure, any condition set forth in Section 6(a), 6(e), 6(f), 6(g) or 6(h) hereof shall not have been satisfied (it being understood that the judgment of such person with respect to the impracticability or inadvisability of such purchase of Securities shall be substituted, for purposes of this Section 4(n), for the respective judgments of an Agent with respect to certain matters referred to in Sections 6(e) and 6(g) hereof, and that such Agent shall have no duty or obligation whatsoever to exercise the judgment permitted under such Sections 6(e) and 6(g) on behalf of any such person); and

(o) To use the net proceeds received by it from the sale of the Securities pursuant to this Agreement in the manner specified in the Prospectus as amended or supplemented under the caption "Use of Proceeds".

4A.

(a) (i) The Company and each Agent agree that the Agents may prepare and use one or more preliminary or final term sheets relating to the Securities containing customary information;

(ii) Each Agent represents that, other than as permitted under subparagraph (a)(i) above, it has not made and will not make any offer relating to the Securities that would constitute a "free writing prospectus" as defined in Rule 405 under the Act without the prior consent of the Company and GS&Co. and that, with respect to any issue of Securities to be sold pursuant to a Terms Agreement, Schedule II(a) to such Terms Agreement will be a complete list of any free writing prospectuses for which the Agents have received such consent; and

(iii) The Company represents and agrees that it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus without the prior consent of GS&Co. and that, with respect to any issue of Securities to be sold pursuant to a Terms Agreement, Schedule II(a) to such Terms Agreement will be a complete list of any free writing prospectuses for which the Company has received such consent;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus any event occurred or occurs as a result of which such Issuer Free Writing Prospectus would conflict with the information in the Registration Statement, the Prospectus, the Prospectus as amended or supplemented or the Pricing Supplement or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to GS&Co. and, if requested by GS&Co., will prepare and furnish without charge to each Agent an Issuer Free Writing Prospectus or other document which will correct such conflict, statement or omission; *provided, however*, that this representation and warranty shall not apply to any statements or omissions in an Issuer Free Writing Prospectus made in reliance upon and in conformity with information furnished in writing to the Company by an Agent through GS&Co. expressly for use therein.

5. The Company covenants and agrees with each Agent that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Securities under the Act and all other expenses in connection with the preparation, printing and filing of the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Prospectus, any Issuer Free Writing Prospectus and any Pricing Supplements and all other amendments and supplements thereto and the mailing and delivering of copies thereof to such Agent; (ii) the cost of printing, producing or reproducing this Agreement, any Terms Agreement, any indenture, closing documents (including any compilations

thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Securities; (iii) all expenses in connection with the qualification of the Securities for offering and sale under state securities laws as provided in Section 4(b) hereof, including the fees and disbursements of counsel for the Agents in connection with such qualification and in connection with the Blue Sky and Legal Investment Memoranda; (iv) any fees charged by securities rating services for rating the Securities; (v) any filing fees incident to, and the fees and disbursements of counsel for the Agents in connection with, any required review by the Financial Industry Regulatory Authority, Inc. of the terms of the sale of the Securities (other than, in the case of GS&Co., in any Secondary Market Transactions); (vi) the cost of preparing the Securities; (vii) the fees and expenses of the Trustee and any agent of the Trustee and any transfer or paying agent of the Company and the fees and disbursements of counsel for the Trustee or such agent in connection with the 2008 Indenture and the Securities; (viii) any advertising expenses connected with the solicitation of offers to purchase and the sale of Securities so long as such advertising expenses have been approved by the Company; and (ix) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section. Except as provided in Sections 7 and 8 hereof, each Agent shall pay all other expenses it incurs.

6. The obligation of any Agent, as agent of the Company, at any time ("Solicitation Time") to solicit offers to purchase the Securities from the Company and the obligation of any Agent to purchase Securities from the Company as principal, pursuant to any Terms Agreement or otherwise, shall in each case be subject, in such Agent's discretion, to the condition that all representations and warranties and other statements of the Company herein (and, in the case of an obligation of an Agent under a Terms Agreement, in or incorporated by reference in such Terms Agreement) are true and correct at and as of the Recommencement Date and any applicable date referred to in Section 4(j) hereof that is prior to such Solicitation Time or Time of Delivery, as the case may be, and at and as of such Solicitation Time or at and as of both such Time of Delivery and Time of Sale, as the case may be ("Time of Sale" shall mean, with respect to any obligation of an Agent to purchase Securities as principal, the time when the related Terms Agreement becomes effective or if there is no Terms Agreement, the time when the Agent otherwise becomes committed to purchase the Securities); the condition that prior to such Solicitation Time or Time of Delivery, as the case may be, the Company shall have performed all of its obligations hereunder theretofore to be performed; and the following additional conditions:

(a) (i) With respect to any Securities sold at or prior to such Solicitation Time or Time of Delivery, as the case may be, the Prospectus as amended or supplemented (including the Pricing Supplement) with respect to such Securities shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 4(a) hereof; (ii) the final term sheet contemplated by Section 4(a)(iv) hereof and any other material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time periods prescribed for such filings by Rule 433; (iii) no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission and no notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act shall have been received; (iv) no stop order suspending or preventing the use of the Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission, and (v) all requests for additional information on the part of the Commission shall have been complied with to the reasonable satisfaction of such Agent;

(b) (i) Sullivan & Cromwell LLP, acting as counsel to the Company, shall have furnished to such Agent an opinion and a letter, dated the Recommencement Date, to the effect set forth in Annex III and (ii) if and to the extent requested by such Agent, Sullivan & Cromwell LLP, acting as counsel to the Company, shall have furnished to such Agent, with respect to each applicable filing date and each applicable sale date relating to such Agent referred to in Section 4(k) hereof that is after the Recommencement Date but is on or prior to such Solicitation Time or Time of Delivery, as the case may be, a letter or letters, dated such applicable filing date or the Time of Delivery relating to such applicable sale date, as the case may be, to the effect that such Agent may rely on the opinion and letter which were last furnished to such Agent pursuant to this Section 6 (b) to the same extent as though they were dated the date of such letter or letters authorizing reliance (except that the statements in such last opinion and letter shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented to such date) or, in any case, in lieu of such an opinion and letter, an opinion and letter of the same tenor as the opinion and letter referred to in clause (i) but modified to relate to the Registration Statement and the Prospectus as amended and supplemented to such date; and in each case such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) A General Counsel or Associate General Counsel of the Company, or other counsel for the Company satisfactory to such Agent, shall have furnished to such Agent such counsel's written opinions, dated the Recommencement Date, in form and substance satisfactory to such Agent, to the effect set forth in Annex IV hereto;

(d) Not later than 10:00 a.m., New York City time, on the Recommencement Date and on each applicable date referred to in Section 4(i) hereof that is on or prior to such Solicitation Time or Time of Delivery, as the case may be, the independent registered public accounting firm who have audited the financial statements of the Company and its subsidiaries included or incorporated by reference in the Registration Statement shall have furnished to such Agent a letter, dated the Recommencement Date or such applicable date, as the case may be, in form and substance satisfactory to such Agent, to the effect set forth in Annex V hereto;

(e) (i) Neither the Company nor any of its Significant Subsidiaries shall have sustained since the date of the latest audited financial statements included or incorporated by reference in the Prospectus as amended or supplemented any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Prospectus as amended or supplemented and (ii) since the respective dates as of which information is given in the Prospectus as amended prior to the date of the Pricing Supplement relating to the Securities to be delivered at the relevant Time of Delivery there shall not have been any change in the capital stock or long-term debt of the Company or any of its Significant Subsidiaries or any change, or any development involving a prospective change, in or affecting the general affairs, management, financial position, stockholders' equity or results of operations of the Company and its Significant Subsidiaries, otherwise than as set forth or contemplated in the Prospectus as amended or supplemented,

the effect of which, in any such case described in clause (i) or (ii), is in the judgment of such Agent so material and adverse as to make it impracticable or inadvisable to proceed with the solicitation by such Agent of offers to purchase Securities from the Company or the purchase by such Agent of Securities from the Company as principal, as the case may be, on the terms and in the manner contemplated in the Prospectus as first amended or supplemented relating to the Securities to be delivered at the relevant Time of Delivery;

(f) On or after the Applicable Time (i) no downgrading shall have occurred in the rating accorded the Company's debt securities by any "nationally recognized statistical rating organization", as that term is defined by the Commission for purposes of Section 3(a)(62) of the Exchange Act, and (ii) no such organization shall have publicly announced that it has under surveillance or review, with possible negative implications, its rating of any of the Company's debt securities;

(g) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange, (ii) a suspension or material limitation in trading in the Company's securities on the New York Stock Exchange, (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States, (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war, or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in the judgment of such Agent makes it impracticable or inadvisable to proceed with the solicitation of offers to purchase Securities or the purchase of the Securities from the Company as principal pursuant to the applicable Terms Agreement or otherwise, as the case may be, on the terms and in the manner contemplated in the Prospectus as first amended or supplemented relating to the Securities to be delivered at the relevant Time of Delivery;

(h) (i) With respect to any Security denominated in a currency other than the U.S. dollar, more than one currency or a composite currency or any Security the principal or interest of which is indexed to such currency, currencies or composite currency, on or after the date hereof or of any applicable Terms Agreement there shall not have occurred a suspension or material limitation in foreign exchange trading in such currency, currencies or composite currency by a major international bank, a general moratorium on commercial banking activities in the country or countries issuing such currency, currencies or composite currency, the outbreak or escalation of hostilities involving, the occurrence of any material adverse change in the existing financial, political or economic conditions of, or the declaration of war or a national emergency by, the country or countries issuing such currency, currencies or composite currency or the imposition or proposal of exchange controls by any governmental authority in the country or countries issuing such currency, currencies or composite currency; and (ii) with respect to any Security linked to the capital stock of an issuer other than the Company, additional conditions comparable to those set forth in Sections 6(e), 6(f) and 6(g) shall have been satisfied with respect to such issuer (with such additional conditions being identical to those in Sections 6(e), (f) and (g), except that, for this purpose, all references to the Company in such sections shall be deemed to mean such other issuer and, if the principal trading market for such other issuer's capital stock is not the New York Stock Exchange, the reference to the New York Stock Exchange in Section 6(g)(i) shall be deemed to mean either

the New York Stock Exchange or such principal trading market and in Section 6(g)(ii) shall be deemed to mean only such principal trading market), it being understood that nothing in this clause (ii) shall limit or otherwise affect conditions in Sections 6(e), (f) and (g), which shall apply in addition to any conditions applicable pursuant to this clause (ii); and

(i) The Company shall have furnished or caused to be furnished to such Agent certificates of officers of the Company dated the Recommencement Date and each applicable date referred to in Section 4(j) hereof that is on or prior to such Solicitation Time or Time of Delivery, as the case may be, in such form and executed by such officers of the Company as shall be satisfactory to such Agent, as to the accuracy of the representations and warranties of the Company herein at and as of the Recommencement Date or such applicable date, as the case may be (and in the case of any certificates provided at a Time of Delivery, also at and as of the applicable Time of Sale), as to the performance by the Company of all of its obligations hereunder to be performed at or prior to the Recommencement Date or such applicable date, as the case may be, as to the matters set forth in subsections (a) and (e) of this Section 6, and as to such other matters as such Agent may reasonably request.

It is understood and agreed that the opinions, letters and certificates to be furnished on the Recommencement Date pursuant to Sections 6(b)(i), (c), (d) and (i) above may, if GS&Co. requests a later date in writing, instead be furnished on such later date, and the furnishing of such documents shall not be a condition to any obligations of the Agents hereunder or under any Terms Agreement as of any time prior to such later date.

7. (a) The Company will indemnify and hold harmless each Agent against any losses, claims, damages or liabilities, joint or several, to which such Agent may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any preliminary prospectus supplement, the Registration Statement, the Prospectus, the Prospectus as amended or supplemented, or any amendment or supplement thereto, any Issuer Free Writing Prospectus or any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Act, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each such Agent for any legal or other expenses reasonably incurred by it in connection with investigating or defending any such action or claim as such expenses are incurred; *provided*, *however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in any Preliminary Prospectus, any preliminary prospectus supplement, the Registration Statement, the Prospectus, the Prospectus as amended or supplemented, or any such amendment or supplement thereto, or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by such Agent expressly for use therein.

(b) Each Agent will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any preliminary prospectus supplement, the

Registration Statement, the Prospectus, the Prospectus as amended or supplemented or any other prospectus relating to the Securities, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in any Preliminary Prospectus, any preliminary prospectus supplement, the Registration Statement, the Prospectus, the Prospectus as amended or supplemented or any other prospectus relating to the Securities, or any such amendment or supplement thereto, or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by such Agent expressly for use therein; and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party shall not relieve it from any liability which it may have to any indemnified party otherwise than under such subsection. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought under this Section 7 (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to, or an admission of, fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and each Agent on the other from the offering of the Securities to which such loss, claim, damage or liability (or action in respect thereof) relates. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law or if the indemnified party failed to give the notice required under subsection (c) above, then each

indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and each Agent on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and each Agent on the other shall be deemed to be in the same proportion as the total net proceeds from the sale of Securities (before deducting expenses) received by the Company bear to the total commissions or discounts received by such Agent from the Company in respect thereof. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or by any Agent on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and each Agent agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by *pro rata* allocation (even if all Agents were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), an Agent shall not be required to contribute any amount in excess of the amount by which the total public offering price at which the Securities purchased by or through it were sold exceeds the amount of any damages which such Agent has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The obligations of each of the Agents under this subsection (d) to contribute are several in proportion to the respective purchases made by or through it to which such loss, claim, damage or liability (or action in respect thereof) relates and are not joint.

(e) The obligations of the Company under this Section 7 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each person, if any, who controls any Agent within the meaning of the Act and each broker-dealer affiliate of any Agent; and the obligations of each Agent under this Section 7 shall be in addition to any liability which such Agent may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company and to each person, if any, who controls the Company within the meaning of the Act.

8. Each Agent, in soliciting offers to purchase Securities from the Company and in performing the other obligations of such Agent hereunder (other than in respect of any purchase by an Agent as principal, pursuant to a Terms Agreement or otherwise), is acting solely as agent for the Company and not as principal. Each Agent will make reasonable efforts to assist the Company in obtaining performance by each purchaser whose offer to purchase Securities from the Company was solicited by such Agent and has been accepted by the Company, but such Agent shall not have any liability to the Company in the event such purchase is not consummated for any reason. If the Company shall default on its obligation to deliver Securities to a purchaser whose offer it has accepted, the Company shall (i) hold each Agent harmless against any loss, claim or damage arising from or as a result of such default by the Company and (ii) notwithstanding such default, pay to the Agent that solicited such offer any commission to which it would be entitled in connection with such sale.

9. The respective indemnities, agreements, representations, warranties and other statements by any Agent and the Company set forth in or made pursuant to this Agreement shall remain in full force and effect regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Agent or any controlling person of any Agent, or the Company, or any officer or director or any controlling person of the Company, and shall survive each delivery of and payment for any of the Securities.

10. (a) The provisions of this Agreement relating to the solicitation of offers to purchase Securities from the Company may be suspended or terminated at any time by the Company as to any Agent or by any Agent as to such Agent upon the giving of written notice of such suspension or termination to such Agent or the Company, as the case may be. In the event of such suspension or termination with respect to any Agent, (i) this Agreement shall remain in full force and effect with respect to any Agent as to which such suspension or termination has not occurred, (ii) this Agreement shall remain in full force and effect with respect to the rights and obligations of any party which have previously accrued or which relate to Securities which are already issued, agreed to be issued or the subject of a pending offer at the time of such suspension or termination (including all Securities that may be the subject of a Secondary Market Transaction at any time during the Secondary Transactions Period) and (iii) in any event, this Agreement shall remain in full force and effect insofar as the fourth paragraph of Section 2(a) and Sections 4(d), 4(e), 5, 7, 8 and 9 hereof are concerned.

(b) The Company, in its sole discretion, may appoint one or more additional parties to act as Agents hereunder from time to time. Any such appointment shall be made in a writing signed by the Company and the party so appointed. Such appointment shall become effective in accordance with its terms after the execution and delivery of such writing by the Company and such other party. When such appointment is effective, such other party shall be deemed to be one of the Agents referred to in, and to have the rights and obligations of an Agent under, this Agreement, subject to the terms and conditions of such appointment. The Company shall deliver a copy of such appointment to each other Agent promptly after it becomes effective.

(c) The Company, in its sole discretion, may increase the aggregate initial offering price of the Securities from time to time without consent of, or notice to, any Agent.

(d) The Company and any Agent may amend any provision of this Agreement with respect to such Agent without consent of, or notice to, any other Agent. Any such amendment shall be made in a writing signed by the Company and each Agent that is a party to such amendment. In the event of such amendment, this Agreement shall remain in full force and effect with respect to any Agent that is not a party to such amendment (without giving effect to such amendment with respect to such Agent) unless suspended or terminated with respect to such Agent pursuant to clause (a) of this Section 10.

11. The following terms shall apply to any Terms Agreement if provided for therein:

(a) If any Agent shall default in its obligation to purchase the Securities which it has agreed to purchase pursuant to such Terms Agreement, the Representatives named in such Terms Agreement may in their discretion arrange for the Representatives or another party or other parties to purchase such Securities on the terms provided by such Terms Agreement. If within thirty-six hours after such default by any Agent the Representatives do not arrange for the purchase of such Securities, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to the Representatives to purchase such Securities on such terms. In the event that, within the respective prescribed periods, the Representatives notify the Company that they have so arranged for the purchase of such Securities, or the Company notifies the Representatives that it has so arranged for the purchase of such Securities, the Representatives or the Company shall have the right to postpone the Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments to the Registration Statement or the Prospectus which in the Representatives' opinion may thereby be made necessary. The term "Agent" as used with respect to such Terms Agreement shall include any person substituted under this Section 11 (if applicable) with like effect as if such person had originally been a party to such Terms Agreement.

(b) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Agent or Agents by the Representatives and the Company as provided in subsection (a) above, the aggregate principal amount of such Securities which remains unpurchased does not exceed one-eleventh of the aggregate principal amount of all the Securities covered by such Terms Agreement, then the Company shall have the right to require each non-defaulting Agent to purchase the principal amount of Securities which such Agent agreed to purchase pursuant to such Terms Agreement and, in addition, to require each non-defaulting Agent to purchase its pro rata share (based on the principal amount of Securities which such Agent agreed to purchase pursuant to such Terms Agreement) of the Securities of such defaulting Agent or Agents for which such arrangements have not been made; but nothing herein shall relieve a defaulting Agent from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Agent or Agents by the Agents and the Company as provided in subsection (a) above, the aggregate principal amount of Securities pursuant to such Terms Agreement which remains unpurchased exceeds one-eleventh of the aggregate principal amount of all the Securities under such Terms Agreement, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Agents to purchase Securities of a defaulting Agent or Agents, then such Terms Agreement shall thereupon terminate, without liability on the part of any non-defaulting Agent or the Company, except for the expenses to be borne by the Company and the Agents as provided in Section 5 hereof incorporated therein by reference and the indemnity and contribution agreement in Section 7 hereof incorporated therein by reference; but nothing herein shall relieve a defaulting Agent from liability for its default.

12. Except as otherwise specifically provided herein or in the Administrative Procedure, all statements, requests, notices and advices hereunder shall be in writing, or by telephone if promptly confirmed in writing, and if to GS&Co., shall be sufficient in all respects when delivered or sent by facsimile transmission, personal delivery or registered mail to 200 West Street, New York, New York 10282, Facsimile Transmission No. (212) 902-3000, Attention: Registration Department; if to any Agent other than GS&Co., shall be sufficient in all respects when delivered or sent by facsimile transmission, personal delivery or registered mail to the facsimile number or address provided by such Agent to the Company in the document appointing such Agent as an Agent under this Agreement; and if to the Company, shall be sufficient in all respects when delivered or sent by facsimile transmission, personal delivery or registered mail to the address of the Company set forth in the Registration Statement, Facsimile No. (212) 902-3325, Attention: Treasury Department. Any such statements, requests, notices or advices shall take effect upon receipt thereof.

13. This Agreement and any Terms Agreement shall be binding upon, and inure solely to the benefit of, each Agent and the Company and, to the extent provided in Sections 7, 8 and 9 hereof, the officers and directors of the Company and any person who controls any Agent or the Company, and their respective personal representatives, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement or any Terms Agreement. No purchaser of any of the Securities through or from any Agent hereunder shall be deemed a successor or assign by reason merely of such purchase.

14. Time shall be of the essence in this Agreement and any Terms Agreement. As used herein, the term “business day” shall mean any day when the Commission’s office in Washington, D.C. is open for business.

15. The Company acknowledges and agrees that (i) the purchase and sale of the Securities pursuant to this Agreement and any Terms Agreement is an arm’s-length commercial transaction between the Company, on the one hand, and the Agents, on the other, (ii) in connection therewith and with the process leading to such transaction each Agent is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Agent has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Agent has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement and (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate. The Company agrees that it will not claim that the Agent, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

16. This Agreement and any Terms Agreement supersede all prior agreements and understandings (whether written or oral) between the Company and the Agents, or any of them, with respect to the subject matter hereof.

17. This Agreement and any Terms Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

18. The Company and each of the Agents hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement, any Terms Agreement or the transactions contemplated hereby.

19. This Agreement and any Terms Agreement may be executed by any one or more of the parties hereto and thereto in any number of counterparts, each of which shall be an original, but all of such respective counterparts shall together constitute one and the same instrument.

20. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Agents imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, "tax structure" is limited to any facts that may be relevant to that treatment.

21.

(a) (i) In the event that any party that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such party of this Agreement or any Terms Agreement and any interest and obligation in or under this Agreement or any Terms Agreement will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement or any Terms Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(ii) In the event that any party that is a Covered Entity or any BHC Act Affiliate of such party becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement or any Terms Agreement that may be exercised against such party are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement or any Terms Agreement were governed by the laws of the United States or a state of the United States. The requirements of this Section 21(a) apply notwithstanding the following Section 21(b).

(b) (i) Notwithstanding anything to the contrary in this Agreement, any Terms Agreement or any other agreement, but subject to the requirements of Section 21(a), no party to this Agreement or any Terms Agreement shall be permitted to exercise any Default Right against a party that is a Covered Entity with respect to this Agreement or any Terms Agreement that is related, directly or indirectly, to a BHC Act Affiliate of such party becoming subject to an Insolvency Proceeding, except to the extent the exercise of such Default Right would be permitted under the creditor protection provisions of 12 C.F.R. § 252.84, 12 C.F.R. § 47.5, or 12 C.F.R. § 382.4, as applicable;

(ii) After a BHC Act Affiliate of a party that is a Covered Entity has become subject to an Insolvency Proceeding, if any party to this Agreement or any Terms Agreement seeks to exercise any Default Right against such Covered Entity with respect to this Agreement or any Terms Agreement, the party seeking to exercise a Default Right shall have the burden of proof, by clear and convincing evidence, that the exercise of such Default Right is permitted hereunder.

(c) For purposes of this Section 21,

(i) "**BHC Act Affiliate**" of a party means an "affiliate" (as such term is defined under, and interpreted in accordance with, 12 U.S.C. 1841(k)) of such party;

(ii) "**Covered Entity**" means any of the following: (x) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (y) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (z) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b);

(iii) "**Default Right**" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1 as applicable;

(iv) "**Insolvency Proceeding**" means a receivership, insolvency, liquidation, resolution, or similar proceeding;

(v) "**U.S. Special Resolution Regime**" means each of (y) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (z) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

If the foregoing is in accordance with your understanding, please sign and return to us four counterparts hereof, whereupon this letter and the acceptance by you thereof shall constitute a binding agreement between the Company and you in accordance with its terms.

Very truly yours,

The Goldman Sachs Group, Inc.

By: /s/ Jane M. Kelsey
Name: Jane M. Kelsey
Title: Assistant Treasurer

Accepted in New York, New York,
as of the date hereof:

Goldman Sachs & Co. LLC

/s/ Adam Greene
Name: Adam Greene
Title: Managing Director

[*Signature page to Second Amended and Restated MTNN Distribution Agreement*]

ANNEX I

The Goldman Sachs Group, Inc.

Medium-Term Notes, Series N

Terms Agreement

_____, 20____

Goldman Sachs & Co. LLC,
200 West Street,
New York, New York 10282.
[Insert names of any other purchasers]

Ladies and Gentlemen:

The Goldman Sachs Group, Inc. (the "Company") proposes, subject to the terms and conditions stated herein and in the Medium-Term Notes, Series N Second Amended and Restated Distribution Agreement, dated December [•], 2018 (the "MTNN Distribution Agreement"), between the Company on the one hand and Goldman Sachs & Co. LLC ("GS&Co.") and any other party acting as Agent thereunder on the other (such other Agents, the "Purchasing Agents"), to issue and sell to you and any applicable Purchase Agents, severally, the securities specified in Schedule I hereto (the "Purchased Securities"). Each of the provisions of the MTNN Distribution Agreement not specifically related to the solicitation by the Agents, as agents of the Company, of offers to purchase Securities is incorporated herein by reference in its entirety, and shall be deemed to be part of this Terms Agreement to the same extent as if such provisions had been set forth in full herein. Unless otherwise defined herein, terms defined in the MTNN Distribution Agreement are used herein as therein defined. Nothing contained herein or in the MTNN Distribution Agreement shall make any party hereto an agent of the Company or make such party subject to the provisions therein relating to the solicitation of offers to purchase Securities from the Company, solely by virtue of its execution of this Terms Agreement. Each of the representations and warranties set forth therein shall be deemed to have been made at and as of the date of this Terms Agreement, except that each representation and warranty in Section 1 of the MTNN Distribution Agreement which makes reference to the Prospectus shall be deemed to be a representation and warranty as of the date of the MTNN Distribution Agreement in relation to the Prospectus (as therein defined), and also a representation and warranty as of the date of this Terms Agreement in relation to the Prospectus as amended and supplemented to relate to the Purchased Securities, and except that the representation and warranty in Section 1(c) of the MTNN Distribution Agreement shall be deemed to be a representation and warranty as of the Applicable Time in relation to the Pricing Disclosure Package as provided in said Section 1(c).

[Notwithstanding the foregoing, insofar as it is deemed to be incorporated in and made a part of this Terms Agreement, the MTNN Distribution Agreement shall be subject to, and to the extent necessary amended by, the Letter of Appointment pursuant to which we appointed such Purchasing Agent to act as an Agent under the MTNN Distribution Agreement on certain terms and conditions

specified in such letter. For all purposes of this Terms Agreement, references to the "Agents" shall mean the Purchasing Agents listed in Schedule I hereto for which GS&Co. is acting as Representative. Each of you agrees that all determinations to be made by the Purchasing Agents under this Terms Agreement, including the determination whether or not the conditions in Section 6 of the MTNN Distribution Agreement have been satisfied and, if not, whether or not any such conditions shall be waived, shall be made solely by GS&Co., on behalf of the Purchasing Agents.**]**

An amendment to the Registration Statement, or a supplement to the Prospectus, as the case may be, relating to the Purchased Securities, in the form hereafter delivered to you will be filed with the Commission.

Subject to the terms and conditions provided for herein and in the MTNN Distribution Agreement as incorporated herein by reference, the Company agrees to issue and sell to **[**each of**]** you, and **[**each of**]** you agree**[**s**]** to purchase from the Company, severally and not jointly, at the time and place and at the purchase price set forth in Schedule I hereto, the principal amount of Purchased Securities set forth **[**opposite your respective name**]** in Schedule I hereto. Each of you further agrees, severally and not jointly, that any Purchased Securities offered and sold by you to initial purchasers will be offered and sold at the price to public, and in accordance with the provisions relating to commissions and fees, if any, set forth in Schedule I hereto, unless GS&Co. and the Company otherwise agree.

If the foregoing is in accordance with your understanding, please sign and return to us counterparts hereof, and upon acceptance hereof by you **[**,on behalf of each of the Agents,**]** this letter and such acceptance hereof, including those provisions of the MTNN Distribution Agreement incorporated herein by reference as provided above, shall constitute a binding agreement between **[**you**] [**each of you**]** and the Company. **[**It is understood that the acceptance by GS&Co. of this letter on behalf of each of the other Purchasing Agents is or will be pursuant to authority granted to GS&Co. by such Purchasing Agent.**]**

Very truly yours,

The Goldman Sachs Group, Inc.

By: _____
Name:
Title:

Accepted in New York, New York, as of the date hereof:

Goldman Sachs & Co. LLC

By: _____
Name:
Title:

The following provisions apply to the Purchased Securities (as defined below), unless otherwise specified.

Title of Purchased Securities:

Medium-Term Notes, Series N

[] [%] [Floating Rate] Notes due []

Aggregate Principal Amount to be Purchased:

[$_____ or units of other Specified Currency**]**

[*Price to Public*:**]**

Purchase Price Payable to the Company by the Purchasing Agent:

% of the principal amount of the Purchased Securities **[**, plus accrued interest from _____ to _____**] [**and accrued amortization, if any, from _____ to _____**]**

Method of and Specified Funds for Payment of Purchase Price:

[By certified or official bank check or checks, payable to the order of the Company, in **[[**New York**]** Clearing House**] [**immediately available**]** funds**]**

[By wire transfer to a bank account specified by the Company in **[**next day**] [**immediately available**]** funds**]**

Selling Concession (all of which may be allowed to dealers):

Reallowance:

Indenture:

Senior Debt Indenture, dated as of July 16, 2008, between the Company and The Bank of New York Mellon, as Trustee, as amended by the Fourth Supplemental Indenture dated December 31, 2016 and as it may be further amended or supplemented from time to time

Applicable Time:

Time of Delivery:

Closing Location for Delivery of Securities:

Maturity Date:

Amount Payable to Holder at Maturity:

Denomination:

Interest Rate:

[%**] [**Zero Coupon**] [**Describe applicable floating rate provisions**]**

Interest Payment Dates:

[months and dates**]**

Date from which Interest Accrues:

Listing:

Documents to be Delivered:

The following documents referred to in the MTNN Distribution Agreement shall be delivered as a condition to the Closing:

[None. It is understood and agreed that the Closing shall not be conditioned on the delivery of any document contemplated in Sections 4(k), (l) and (m) and 6(b), (c), (d) and (i) of the MTNN Distribution Agreement.**]**

[(1) The opinion and letter of counsel to the Company referred to in Section 4(k).**]**

[(2) The accountants' letter referred to in Section 4(l).**]**

[(3) The officers' certificate referred to in Section 4(m).**]**

Selling Restrictions:

Other Provisions (including Syndicate Provisions, if applicable):

[Purchase Agents and allocations]

[List syndicate and allocations if applicable]

[The provisions of Section 11 of the MTNN Distribution Agreement shall apply with respect to this Terms Agreement, and the Representatives referred to in Section 11 shall be GS&Co.**]**

[expense reimbursement upon termination**]**

[With regard to the offering and sale of the Securities, all determinations and actions required or permitted to be made pursuant to the MTNN Distribution Agreement or the Terms Agreement by the Agent(s) or the Representatives (including determinations as to whether or not any closing condition has been satisfied and whether or not any unsatisfied conditions shall be waived) shall instead be made **[**solely**]** by **[**GS&Co. and**]** **[**Goldman Sachs International**]** on behalf of all of the Agents or Representatives.**]**

(a) Issuer Free Writing Prospectuses:

- Final term sheet in the form set forth in Schedule III hereto, but only if the Company is obligated to prepare and file such term sheet pursuant to Section 4(a)(iv) of the MTNN Distribution Agreement.

(b) Additional Information in Pricing Disclosure Package:

In addition to the Prospectus as amended or supplemented at the Applicable Time, the Pricing Disclosure Package consists of the following information:

- [The information referred to under the caption [“Additional Information Regarding Terms of the Notes”] beginning on page [ ] of the Pricing Supplement dated the date of this Terms Agreement and relating to the Purchased Securities.]

(c) Additional Documents Incorporated by Reference:

[To be modified as appropriate and completed prior to execution of this Terms Agreement**]**

The Goldman Sachs Group, Inc.

Title of Purchased Securities:

Aggregate Principal Amount Offered:

Price to Public:

Settlement Date:

Managing Underwriters:

Purchase Price by Underwriters:

Maturity Date:

Interest Rate:

Interest Payment Dates:

Interest Reset Dates:

Redemption Provisions:

[Other Provisions:]

The issuer has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternately, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by calling 1-201-793-5170.

ANNEX II

The Goldman Sachs Group, Inc.

Administrative Procedure

This Administrative Procedure relates to the Securities defined in the Medium-Term Notes, Series N Second Amended and Restated Distribution Agreement, dated December [•], 2018 (the "MTNN Distribution Agreement"), between The Goldman Sachs Group, Inc., a Delaware corporation (the "Company") on the one hand and Goldman Sachs & Co. LLC and any other party acting as Agent thereunder, on the other, to which this Administrative Procedure is attached as Annex II. Capitalized terms used herein and not defined herein shall have the meanings given such terms in the MTNN Distribution Agreement, the Prospectus as amended or supplemented, the 2008 Indenture or the Securities. To the extent the procedures set forth below conflict with the provisions of the Securities, the 2008 Indenture or the MTNN Distribution Agreement, the relevant provisions of the Securities, the 2008 Indenture and the MTNN Distribution Agreement shall control.

The procedures to be followed with respect to the settlement of sales of Securities directly by the Company to purchasers solicited by an Agent, as agent, are set forth below. The terms and settlement details related to a purchase of Securities by an Agent, as principal, from the Company will be set forth in a Terms Agreement pursuant to the MTNN Distribution Agreement, unless the Company and such Agent otherwise agree as provided in Section 2(b) of the MTNN Distribution Agreement, in which case the procedures to be followed in respect of the settlement of such sale will be as set forth below. An Agent, in relation to a purchase of a Security by a purchaser solicited by such Agent, is referred to herein as the "Selling Agent" and, in relation to a purchase of a Security by such Agent as principal other than pursuant to a Terms Agreement, as the "Purchasing Agent".

The Company will advise each Agent in writing of those persons with whom such Agent is to communicate regarding offers to purchase Securities and the related settlement details.

Each Security will be issued only in fully registered form and will be represented by either a global security (a "Global Security") delivered to the Trustee, as agent for The Depository Trust Company (the "Depositary"), and recorded in the book-entry system maintained by the Depositary (a "Book-Entry Security"), or a certificate issued in definitive form (a "Certificated Security") delivered to a person designated by an Agent, as set forth in the applicable Pricing Supplement. An owner of a Book-Entry Security will not be entitled to receive a certificate representing such a Security, except as provided in the 2008 Indenture.

Book-Entry Securities will be issued in accordance with the Administrative Procedure set forth in Part I hereof, and Certificated Securities will be issued in accordance with the Administrative Procedure set forth in Part II hereof.

PART I: ADMINISTRATIVE PROCEDURE FOR BOOK-ENTRY SECURITIES

In connection with the qualification of the Book-Entry Securities for eligibility in the book-entry system maintained by the Depositary, the Trustee will perform the custodial, document control and administrative functions described below in accordance with its obligations as a participant in the Depositary.

Posting Rates by the Company:

The Company and the Agents will discuss from time to time the rates of interest per annum to be borne by and the maturity of Book-Entry Securities that may be sold as a result of the solicitation of offers by an Agent. The Company may establish a fixed set of interest rates and maturities for an offering period ("posting"). If the Company decides to change already posted rates, it will promptly advise the Agents to suspend solicitation of offers until the new posted rates have been established with the Agents.

Acceptance of Offers by the Company:

Each Agent will promptly advise the Company by electronic mail or other appropriate means of all reasonable offers to purchase Book-Entry Securities, other than those rejected by such Agent. Each Agent may, in its discretion reasonably exercised, reject any offer received by it in whole or in part. Each Agent also may make offers to the Company to purchase Book-Entry Securities as a Purchasing Agent. The Company will have the sole right to accept offers to purchase Book-Entry Securities and may reject any such offer in whole or in part.

The Company will promptly notify the Selling Agent or Purchasing Agent, as the case may be, of its acceptance or rejection of an offer to purchase Book-Entry Securities. If the Company accepts an offer to purchase Book-Entry Securities, it will confirm such acceptance in writing to the Selling Agent or Purchasing Agent, as the case may be, and the Trustee.

Communication of Sale Information to the Company by Agent and Settlement Procedures:

A. After the acceptance of an offer by the Company, the Selling Agent or Purchasing Agent, as the case may be, will communicate promptly, but in no event later than the time set forth under "Settlement Procedure Timetable" below, the following details of the terms of such offer (the "Sale Information") to the Company by electronic mail or by facsimile transmission or other acceptable written means:

(1) Principal Amount of Book-Entry Securities to be purchased;

(2) If a Fixed Rate Book-Entry Security, the interest rate and initial interest payment date;

(3) Trade Date;

(4) Settlement Date;

(5) Maturity Date;

(6) Specified Currency and, if the Specified Currency is other than U.S. dollars, the applicable Exchange Rate for such Specified Currency (it being understood that currently the Depositary accepts deposits of Global Securities denominated in U.S. dollars only);

(7) The Exchange Rate Agent and the Exchange Rate Determination Date, if applicable;

(8) Issue Price;

(9) Selling Agent's commission or Purchasing Agent's discount, as the case may be;

(10) Net Proceeds to the Company;

(11) If a redeemable or repayable Book-Entry Security, such of the following as are applicable:

(i) Redemption Commencement Date,

(ii) Initial Redemption Price (% of par),

(iii) Amount (% of par) that the Redemption Price shall decline (but not below par) on each anniversary of the Redemption Commencement Date,

(iv) Repayment date, and

(v) Repayment price;

(12) If an Original Issue Discount Book-Entry Security, the total amount of Original Issue Discount, the yield to Maturity and the initial accrual period of Original Issue Discount;

(13) If a Floating Rate Book-Entry Security, such of the following as are applicable:

(i) Interest Rate Basis,

(ii) Index Maturity and Index Currency,

(iii) Spread or Spread Multiplier,

(iv) Maximum Rate,

(v) Minimum Rate,

(vi) Initial Base Rate,

(vii) Initial Interest Rate,

(viii) Interest Reset Dates,

(ix) Calculation Dates,

(x) Interest Determination Dates,

(xi) Interest Payment Dates, and

(xii) Calculation Agent;

(14) Selling Agent or Purchasing Agent;

(15) Regular Record Dates;

(16) Day Count Convention; and

(17) Business Day Convention.

B. After receiving the Sale Information from the Selling Agent or Purchasing Agent, as the case may be, the Company will communicate such Sale Information to the Trustee by facsimile transmission or other acceptable written means. The Trustee will assign a CUSIP number to the Global Security representing such Book-Entry Security from a list of CUSIP numbers previously delivered to the Trustee by the Company and then advise the Company and the Selling Agent or Purchasing Agent, as the case may be, of such CUSIP number.

C. Unless the Book-Entry Security is settling using the Depositary's MMI procedures and the Master Global Note, the Trustee will enter a pending deposit message through the Depositary's Participant Terminal System, providing appropriate and customary settlement information to the Depositary.

D. Unless the Book-Entry Security is settling using the Depositary's MMI procedures and the Master Global Note, the Trustee will complete and authenticate the Global Security previously delivered by the Company representing such Book-Entry Security. In the case of the Master Global Note, the Trustee shall complete and update its records and the annex thereto in accordance with the Company Order.

E. Unless the Book-Entry Security is settling using the Depositary's MMI procedures and the Master Global Note, the Depositary will credit such Book-Entry Security to the Trustee's participant account at the Depositary via the Depositary's Fast Automated Securities Transfer program and will update the balance via the Fast Reject and Confirmation function ("FRAC"). In the case of a settlement using the Master Global Note and MMI procedures, the Trustee will send issuance instructions to DTC resulting in a deposit of the applicable MMI position to the Trustee's participant account at the Depositary. The MMI position is then delivered from the Trustee's account to the receiving counterparties (free of payment).

F. Transfers of funds will be settled outside the Depositary's system on the Settlement Date (as defined below).

G. Upon confirmation of receipt by the Company of the funds therefor, the Trustee will enter a deliver free order through the Depositary's Participant Terminal System instructing the Depositary to debit such Book-Entry Security to the Trustee's participant account and credit such Book-Entry Security to such Agent's participant account. The entry of such a deliver order shall constitute a representation and warranty by the Trustee to the Depositary that (a) the Global Security representing such Book-Entry Security has been issued and authenticated or, in the case of the Master Global Note, the notation on such Master Global Note has been made and (b) the Trustee is holding such Global Security or Master Global Note as agent for the Depository.

H. If applicable, such Agent will enter a deliver free order through the Depositary's Participant Terminal System instructing the Depositary to debit such Book-Entry Security to such Agent's participant account and credit such Book-Entry Security to the participant accounts of the participants with respect to such Book-Entry Security.

I. Upon request, the Trustee will send to the Company a statement setting forth the principal amount of Book-Entry Securities outstanding as of that date under the 2008 Indenture.

J. Such Agent will confirm the purchase of such Book-Entry Security to the purchasers either by transmitting to the participants with respect to such Book-Entry Security a confirmation order or orders through the Depositary's institutional delivery system or by mailing a written confirmation to such purchasers.

K. The Depositary will, at any time, upon request of the Company or the Trustee, promptly furnish to the Company or the Trustee a list of the names and addresses of the participants for whom the Depositary has credited Book-Entry Securities.

Preparation of Pricing Supplement:

If the Company accepts an offer to purchase a Book-Entry Security, it will prepare a Pricing Supplement reflecting the terms of such Book-Entry Security and arrange to have delivered to the Selling Agent or Purchasing Agent, as the case may be, electronic copies of such Pricing Supplement, not later than 5:00 p.m., New York City time, on the second business day following the Trade Date (as defined below), or if the Company and the purchaser (s) agree to settlement on the business day following the date of acceptance of such offer, not later than noon, New York City time, on such date. The Company will arrange to have the Pricing Supplement filed with the Commission not later than the close of business of the Commission on the second business day following the date on which such Pricing Supplement is first used (or not later than the close of business of the Commission on a later date, if still considered timely under Rule 424(b) under the Securities Act of 1933).

Delivery of Confirmation and Prospectus to Purchasers by Selling Agent:

The Selling Agent will deliver to each purchaser of a Book-Entry Security a written confirmation of the sale and delivery and payment instructions. In addition, the Selling Agent will deliver to such purchaser or its agent the Prospectus as amended or supplemented (including the Pricing Supplement) in relation to such Book-Entry Security prior to or together with the earlier of the delivery to such purchaser or its agent of (a) the confirmation of sale or (b) the Book-Entry Security.

Date of Settlement:

The receipt by the Company of immediately available funds in payment for a Book-Entry Security and the authentication and issuance of the Global Security representing such Book-Entry Security, or a notation on the Master Global Note, shall constitute "settlement" with respect to such Book-Entry Security. All orders of Book-Entry Securities solicited by a Selling Agent or made by a Purchasing Agent and accepted by the Company on a particular date (the "Trade Date") will be settled on a date (the "Settlement Date") which is the third business day after the Trade Date pursuant to the "Settlement Procedure Timetable" set forth below, unless the Company and the purchaser(s) agree to settlement on another business day which shall be no earlier than the next business day after the Trade Date.

Settlement Procedure Timetable:

For orders of Book-Entry Securities solicited by a Selling Agent and accepted by the Company for settlement on the third business day after the Trade Date, Settlement Procedures "A" through "H" set forth above shall be completed as soon as possible but not later than the respective times (New York City time) set forth below:

Settlement Procedure		Time
A	5:00 p.m.	on the business day following the Trade Date or 10:00 a.m. on the business day prior to the Settlement Date, whichever is earlier
B	12:00 noon	on the second business day immediately preceding the Settlement Date
C	2:00 p.m.	on the second business day immediately preceding the Settlement Date
D	9:00 a.m.	on the Settlement Date
E-F	10:00 a.m.	on the Settlement Date
G-H	2:00 p.m.	on the Settlement Date

If the initial interest rate for a Floating Rate Book-Entry Security has not been determined at the time that Settlement Procedure "A" is completed, Settlement Procedures "B" and "C" shall be completed as soon as such rate has been determined but no later than 2:00 p.m. on the second business day immediately preceding the Settlement Date.

PART II: ADMINISTRATIVE PROCEDURE FOR CERTIFICATED SECURITIES

Posting Rates by Company:

The Company and the Agents will discuss from time to time the rates of interest per annum to be borne by and the maturity of Certificated Securities that may be sold as a result of the solicitation of offers by an Agent. The Company may establish a fixed set of interest rates and maturities for an offering period ("posting"). If the Company decides to change already posted rates, it will promptly advise the Agents to suspend solicitation of offers until the new posted rates have been established with the Agents.

Acceptance of Offers by Company:

Each Agent will promptly advise the Company by telephone or other appropriate means of all reasonable offers to purchase Certificated Securities, other than those rejected by such Agent. Each Agent may, in its discretion reasonably exercised, reject any offer received by it in whole or in part. Each Agent also may make offers to the Company to purchase Certificated Securities as a Purchasing Agent. The Company will have the sole right to accept offers to purchase Certificated Securities and may reject any such offer in whole or in part.

The Company will promptly notify the Selling Agent or Purchasing Agent, as the case may be, of its acceptance or rejection of an offer to purchase Certificated Securities. If the Company accepts an offer to purchase Certificated Securities, it will confirm such acceptance in writing to the Selling Agent or Purchasing Agent, as the case may be, and the Trustee.

Communication of Sale Information to Company by Agent:

After the acceptance of an offer by the Company, the Selling Agent or Purchasing Agent, as the case may be, will communicate promptly the following details of the terms of such offer (the "Sale Information") to the Company by electronic mail or by facsimile transmission or other acceptable written means:

(1) Principal Amount of Certificated Securities to be purchased;

(2) If a Fixed Rate Certificated Security, the interest rate and initial interest payment date;

(3) Trade Date;

(4) Settlement Date;

(5) Maturity Date;

(6) Specified Currency and, if the Specified Currency is other than U.S. dollars, the applicable Exchange Rate for such Specified Currency;

(7) The Exchange Rate Agent and the Exchange Rate Determination Date, if applicable;

(8) Issue Price;

(9) Selling Agent's commission or Purchasing Agent's discount, as the case may be;

(10) Net Proceeds to the Company;

(11) If a redeemable or repayable Certificated Security, such of the following as are applicable:

(i) Redemption Commencement Date,

(ii) Initial Redemption Price (% of par),

(iii) Amount (% of par) that the Redemption Price shall decline (but not below par) on each anniversary of the Redemption Commencement Date,

(iv) Repayment date, and

(v) Repayment price;

(12) If an Original Issue Discount Certificated Security, the total amount of Original Issue Discount, the yield to Maturity and the initial accrual period of Original Issue Discount;

(13) If a Floating Rate Certificated Security, such of the following as are applicable:

(i) Interest Rate Basis,

(ii) Index Maturity and Index Currency,

(iii) Spread or Spread Multiplier,

(iv) Maximum Rate,

(v) Minimum Rate,

(vi) Initial Base Rate,

(vii) Initial Interest Rate,

(viii) Interest Reset Dates,

(ix) Calculation Dates,

(x) Interest Determination Dates,

(xi) Interest Payment Dates, and

(xii) Calculation Agent;

(14) Selling Agent or Purchasing Agent;

(15) Regular Record Dates;

(16) Day Count Convention;

(17) Business Day Convention;

(18) Name, address and taxpayer identification number of the registered owner(s);

(19) Denomination of certificates to be delivered at settlement; and

(20) Selling Agent or Purchasing Agent.

Preparation of Pricing Supplement by Company:

If the Company accepts an offer to purchase a Certificated Security, it will prepare a Pricing Supplement reflecting the terms of such Certificated Security and arrange to have delivered to the Selling Agent or Purchasing Agent, as the case may be, electronic copies of such Pricing Supplement, not later than 5:00 p.m., New York City time, on the second business day following the Trade Date, or if the Company and the purchaser(s) agree to settlement on the date of acceptance of such offer, not later than noon, New York City time, on such date. The Company will arrange to have the Pricing Supplement filed with the Commission not later than the close of business of the Commission on the second business day following the date on which such Pricing Supplement is first used (or not later than the close of business of the Commission on a later date, if still considered timely under Rule 424 (b) under the Securities Act of 1933).

Delivery of Confirmation and Prospectus to Purchaser by Selling Agent:

The Selling Agent will deliver to each purchaser of a Certificated Security a written confirmation of the sale and delivery and payment instructions. In addition, the Selling Agent will deliver to such purchaser or its agent the Prospectus as amended or supplemented (including the Pricing Supplement, as applicable) in relation to such Certificated Security prior to or together with the earlier of the delivery to such purchaser or its agent of (a) the confirmation of sale or (b) the Certificated Security.

Date of Settlement:

All offers of Certificated Securities solicited by a Selling Agent or made by a Purchasing Agent and accepted by the Company will be settled on a date (the "Settlement Date") which is the third business day after the date of acceptance of such offer, unless the Company and the purchaser(s) agree to settlement (a) on another business day after the acceptance of such offer or (b) with respect to an offer accepted by the Company prior to 10:00 a.m., New York City time, on the date of such acceptance.

Instruction from Company to Trustee for Preparation of Certificated Securities:

After receiving the Sale Information from the Selling Agent or Purchasing Agent, as the case may be, the Company will communicate such Sale Information to the Trustee by electronic mail or by facsimile transmission or other acceptable written means.

The Company will instruct the Trustee by electronic mail, facsimile transmission or other acceptable written means to authenticate and deliver the Certificated Securities no later than 2:15 p.m., New York City time, on the Settlement Date. Such instruction will be given by the Company prior to 3:00 p.m., New York City time, on the business day immediately preceding the Settlement Date unless the Settlement Date is the date of acceptance by the Company of the offer to purchase Certificated Securities, in which case such instruction will be given by the Company by 11:00 a.m., New York City time.

Preparation and Delivery of Certificated Securities by Trustee and Receipt of Payment Therefor:

The Trustee will prepare each Certificated Security and appropriate receipts that will serve as the documentary control of the transaction.

In the case of a sale of Certificated Securities to a purchaser solicited by a Selling Agent, the Trustee will, by 2:15 p.m., New York City time, on the Settlement Date, deliver the Certificated Securities to the Selling Agent for the benefit of the purchaser(s) of such Certificated Securities against delivery by the Selling Agent of a receipt therefor. On the Settlement Date the Selling Agent will deliver payment for such Certificated Securities in immediately available funds to the Company in an amount equal to the issue price of the Certificated Securities less the Selling Agent's commission; *provided* that the Selling Agent reserves the right to withhold any payment for which it has not received funds from the purchaser(s). The Company shall not use any proceeds advanced by a Selling Agent to acquire securities.

In the case of a sale of Certificated Securities to a Purchasing Agent, the Trustee will, by 2:15 p.m., New York City time, on the Settlement Date, deliver the Certificated Securities to the Purchasing Agent against delivery of payment for such Certificated Securities in immediately available funds to the Company in an amount equal to the issue price of the Certificated Securities less the Purchasing Agent's discount.

Failure of Purchaser to Pay Selling Agent:

If a purchaser (other than a Purchasing Agent) fails to make payment to the Selling Agent for a Certificated Security, the Selling Agent will promptly notify the Trustee and the Company thereof by electronic mail or by facsimile transmission or other acceptable written means. The Selling Agent will immediately return the Certificated Security to the Trustee. Immediately upon receipt of such Certificated Security by the Trustee, the Company will return to the Selling Agent an amount equal to the amount, if any, previously paid to the Company in respect of such Certificated Security.

The Trustee will cancel the Certificated Security in respect of which the failure occurred, make appropriate entries in its records and, unless otherwise instructed by the Company, dispose of the Certificated Security in accordance with its procedures then in effect for the disposition of cancelled securities.

ANNEX III-1

Form of Opinion of Sullivan & Cromwell LLP

[date**]**

To Goldman Sachs & Co. LLC and the Other Agents
Under the Distribution Agreement.

Ladies and Gentlemen:

[Use the following if the opinion is not being delivered at a Time of Delivery — In connection with your offering and sale from time to time of**][**We refer to the execution today by The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), and Goldman Sachs & Co. LLC ("GS&Co.") of the Second Amended and Restated Distribution Agreement, dated as of **[**December [•], 2018**]** (the "Distribution Agreement"), relating to**]** the **[**Company's**]** Medium-Term Notes, Series **[**N**]** **[**of The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), which are to be offered for sale from time to time**]**. Such series of securities is hereinafter referred to as the "Series" and any securities to be issued from time to time as part of the Series on or after the date hereof are hereinafter referred to individually as a "Security" and collectively as the "Securities". The Securities are to be issued pursuant to the Senior Debt Indenture, dated as of July 16, 2008, as amended by **[**four**]** supplemental indentures, the latest being dated as of **[**December 31, 2016**]** **[**and as it may be further amended or supplemented from time to time**]** (as so amended, the "Indenture"), between the Company and The Bank of New York Mellon, as trustee (the "Trustee"). The Securities are to be offered for sale pursuant to the Distribution Agreement, and any applicable Terms Agreement (as defined in the Distribution Agreement), by GS&Co. and the other parties that have been appointed as Agents under the Distribution Agreement (GS&Co. and such other parties, the "Agents").**]**

[Use the following if the opinion is being delivered at a Time of Delivery — In connection with the **[**several**]** purchase**[**s**]** today by you **[**and the other Agents named in Schedule I to**][**pursuant to**]** the Terms Agreement, dated ....., 20.. (the "Terms Agreement"), between The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), and you (the "Agent**[**s**]**"), of $..... principal amount of the Company's **[**...%**][**Floating Rate**]** Notes due .... (the "Securities") issued pursuant to the Senior Debt Indenture, dated as of July 16, 2008, as amended by **[**four**]** supplemental indentures, the latest being dated as of **[**December 31, 2016**]** **[**and as it may be further amended or supplemented from time to time**]** (as so amended, the "Indenture"), between the Company and The Bank of New York Mellon, as trustee (the "Trustee"),**]** we, as counsel for the Company, have examined such corporate records, certificates and other documents, and such questions of law, as we have considered necessary or appropriate for the purposes of this opinion. Upon the basis of such examination, it is our opinion that:

(1) The Company has been duly incorporated and is an existing corporation in good standing under the laws of the State of Delaware.

(2) All regulatory consents, authorizations, approvals and filings required to be obtained or made by the Company under the U.S. Bank Holding Company Act of 1956, the U.S. Federal Reserve Act and the New York State Banking Laws, including, in each case, the regulations adopted thereunder (collectively, the "Banking Laws"), for the issuance, sale and delivery of the Securities by the Company to or through the Agent**[**s**]**,

in each case in accordance with the Distribution Agreement and any applicable Terms Agreement, have been obtained or made; provided, however, that for the purposes of this paragraph (2), we express no opinion with respect to any law that may apply by reason of the fact that an issuance, sale or delivery of Securities is made through an Agent, as agent, rather than to an Agent, as principal.

(3) All regulatory consents, authorizations, approvals and filings required to be obtained or made by the Company under the Other Covered Laws (as defined below) for the issuance, sale and delivery of the Securities by the Company to **[**or through**]** the Agent**[**s**]**, in each case in accordance with the Distribution Agreement and any applicable Terms Agreement, have been obtained or made; provided, however, that for the purposes of this paragraph (3), we express no opinion with respect to any law that may apply by reason of the fact that an issuance, sale or delivery of Securities is made through an Agent, as agent, rather than to an Agent, as principal.

(4) The **[**Distribution Agreement has**] [**Distribution Agreement and the Terms Agreement have**]** been duly authorized, executed and delivered by the Company.

(5) The Indenture has been duly authorized, executed and delivered by the Company and duly qualified under the Trust Indenture Act of 1939 and constitutes a valid and legally binding obligation of the Company enforceable in accordance with its terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles.

[Use the following if the opinion is not being delivered at a Time of Delivery — (6) The Series has been duly authorized and established in conformity with the Indenture and, when the terms of a particular Security and of its issuance and sale have been duly authorized and established by all necessary corporate action of the Company in conformity with the Indenture, and such Security has been duly prepared, executed, authenticated and issued in accordance with the Indenture and delivered against payment in accordance with the Distribution Agreement and any applicable Terms Agreement, such Security will constitute a valid and legally binding obligation of the Company enforceable in accordance with its terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles.**]**

[Use the following if the opinion is being delivered at a Time of Delivery — (6) The Securities have been duly authorized, executed, authenticated, issued and delivered and constitute valid and legally binding obligations of the Company enforceable in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles.**]**

(7) The issuance of the Securities in accordance with the Indenture and the sale of the Securities by the Company to **[**or through**]** the Agent**[**s**]** pursuant to the Distribution Agreement and any applicable Terms Agreement **[**do**][**will**]** not, and the

performance by the Company of its obligations under the Securities, the Indenture, the Distribution Agreement and any applicable Terms Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Securities, will not, violate the Banking Laws.

(8) The issuance of the Securities in accordance with the Indenture and the sale of the Securities by the Company to **[**or through**]** the Agent**[**s**]** pursuant to the Distribution Agreement and any applicable Terms Agreement **[**do**][**will**]** not, and the performance by the Company of its obligations under the Securities, the Indenture, the Distribution Agreement and any applicable Terms Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Securities, will not, violate the Other Covered Laws.

(9) The issuance of the Securities in accordance with the Indenture and the sale of the Securities by the Company to **[**or through**]** the Agent**[**s**]** pursuant to the Distribution Agreement and any applicable Terms Agreement **[**do**][**will**]** not, and the performance by the Company of its obligations under the Securities, the Indenture, the Distribution Agreement and any applicable Terms Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Securities, will not, (a) violate the Restated Certificate of Incorporation or the Amended and Restated By-laws of the Company or (b) result in a default under or breach of the agreements filed as exhibits nos. ..... through ....., inclusive, to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 20.. **[**and exhibits nos. .... through ...., inclusive, to the Company's Quarterly Report on Form 10-Q for the quarterly period ended ....., 20..**]** **[**and exhibit**[**s**]** no**[**s**]**. ..... to the Company's Current Report on Form 8-K filed ....., 20..**]**.

(10) The Company is not**[Use the following if the opinion is being delivered at a Time of Delivery —**, and immediately after giving effect to the offering and sale of the Securities would not be on the date hereof**]** an "investment company" as such term is defined in the Investment Company Act of 1940.

[Use the following if the opinion is not being delivered at a Time of Delivery — In connection with our opinion set forth in paragraphs (2), (3), (6), (7), (8) and (9) above, we have assumed (a) that at the time of the issuance, sale and delivery of each particular Security the authorization of the Series will not have been modified or rescinded and the Company will comply with the limits on the incurrence of indebtedness that it has adopted pursuant to the relevant authorization, as those limits may be modified from time to time, and (b) that, with respect to each particular Security, such Security will conform to one of the four forms of Securities (floating rate, fixed rate, index-linked and master note) that are included as exhibits (nos. **[**4.43, 4.46, 4.53, and 4.56**]**, respectively) to the Company's Registration Statement on Form S-3 (File Number 333-219206) relating to the Series or to any substantially similar form.

In connection with our opinion set forth in paragraph (6) above, we have assumed (a) that at the time of the issuance, sale and delivery of each particular Security there will not have occurred any change in law affecting the validity, legally binding character or enforceability of such Security and (b) that the issuance, sale and delivery of each particular Security, all of the terms thereof and the performance by the Company of its obligations thereunder will comply with applicable law and each requirement or restriction imposed by any court or governmental body having jurisdiction over the Company and will not result in a default under or breach of any agreement or instrument then binding upon the Company.

In connection with our opinion set forth in paragraphs (2), (3), (7) and (8) above, we have assumed with respect to each particular Security that the inclusion therein of any alternative or additional terms that are not currently specified in the applicable forms thereof specified in the second preceding paragraph would not require the Company to obtain any regulatory consent, authorization or approval or make any regulatory filing in order for the Company to issue, sell and deliver such Security, and would not result in a violation of applicable law.

In connection with our opinion set forth in paragraph (9) above, we have assumed with respect to each particular Security that the inclusion therein of any alternative or additional terms that are not currently specified in the applicable forms thereof specified in the third preceding paragraph will not cause the issuance, sale or delivery of such Security, or the compliance of the Company with such terms, to violate the Company's Restated Certificate of Incorporation or Amended and Restated By-laws.**]**

[Use the following if the opinion is not being delivered at a Time of Delivery or if the Securities are denominated in a non-U.S. dollar currency — In connection with our opinion set forth in paragraph (6) above, we note that, as of the date of this opinion, a judgment for money in an action based on Securities denominated in foreign currencies or currency units in a Federal or state court in the United States ordinarily would be enforced in the United States only in U.S. dollars. The date used to determine the rate of conversion of the foreign currency or currency unit in which a particular Security is denominated into U.S. dollars will depend upon various factors, including which court renders the judgment. In the case of a Security denominated in a foreign currency, a state court in the State of New York rendering a judgment on such Security would be required under Section 27 of the New York Judiciary Law to render such judgment in the foreign currency in which the Security is denominated, and such judgment would be converted into U.S. dollars at the exchange rate prevailing on the date of entry of the judgment.**]**

We are expressing no opinion in paragraphs (7) and (8) above, insofar as the issuance of the Securities in accordance with the Indenture and the sale of the Securities by the Company to or through the Agent**[**s**]** pursuant to the Distribution Agreement and any applicable Terms Agreement, and the performance by the Company of its obligations under the Securities, the Indenture and the Distribution Agreement and the consummation by the Company of the transactions contemplated for it therein, are concerned, as to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights.

For purposes of our opinion set forth in paragraphs (3) and (8) above, "Other Covered Laws" means the Federal laws of the United States, the laws of the State of New York and the Delaware General Corporation Law (including, in each case, the published rules and regulations thereunder) that in our experience normally are applicable to general business corporations and transactions such as those contemplated by the Distribution Agreement and any applicable Terms Agreement; provided, however, that such term does not include antifraud laws and fraudulent transfer laws, tax laws, the Employee Retirement Income Security Act of 1974, antitrust laws or any law that is applicable to the Company, the Distribution Agreement, any applicable Terms Agreement, the Securities, the Indenture or the transactions contemplated thereby solely as part of a regulatory regime applicable to the Company or its affiliates due to its or their status, business or assets (including any such regime applicable to banks, bank holding companies or broker-dealers), or, solely

for purposes of the opinion in paragraph (8) above, any Federal or state securities laws. With respect to our opinion set forth in paragraphs (2) and (7) above, we note that the Company and each of its transactions, including those contemplated in the Distribution Agreement, any applicable Terms Agreement, the Securities and the Indenture, are also subject to (i) general provisions of the Banking Laws prohibiting the Company from engaging in unsafe and unsound practices, (ii) the U.S. Federal Reserve Act, relating to transactions between the Company and its affiliates, and (iii) other requirements of a prudential nature that are set forth in the Banking Laws, as to all of which we express no opinion.

The foregoing opinion is limited to the Federal laws of the United States, the laws of the State of New York and the General Corporation Law of the State of Delaware, and we are expressing no opinion as to the effect of the laws of any other jurisdiction.

We have relied as to certain matters upon information obtained from public officials, officers of the Company and other sources believed by us to be responsible, and we have assumed that the Indenture has been duly authorized, executed and delivered by the Trustee**[Use the following if the opinion is being delivered at a Time of Delivery —** , that the Securities conform to the specimen thereof examined by us, that the Trustee's certificates of authentication of the Securities have been manually signed by one of the Trustee's authorized officers**]** and that the signatures on all documents examined by us are genuine, assumptions which we have not independently verified.

This opinion is furnished by us, as counsel for the Company, to the Agents, solely for the benefit of the Agents in their capacity as such, and may not be relied upon by any other person. This opinion may not be quoted, referred to or furnished to any purchaser or prospective purchaser of the Securities and may not be used in furtherance of any offer or sale of the Securities.

Very truly yours,

ANNEX III-2

Form of Letter of Sullivan & Cromwell LLP

[date**]**

To Goldman Sachs & Co. LLC and the Other Agents
Under the Distribution Agreement.

Ladies and Gentlemen:

This is with reference to the registration under the Securities Act of 1933 (the "Act") and offering of **[Use the following if the letter is not being delivered at a Time of Delivery — [**an indeterminate aggregate principal amount of**]** Medium-Term Notes, Series N**][Use the following if the letter is being delivered at a Time of Delivery** — $..... principal amount of **[**...%**][**Floating Rate**]** Notes due .....**]** (the "Securities") of The Goldman Sachs Group, Inc. (the "Company"). From time to time in the future, the Securities are to be issued pursuant to the Senior Debt Indenture, dated July 16, 2008 and as previously amended (the "Indenture"), between the Company and The Bank of New York Mellon, as trustee (the "Trustee"), and offered and sold pursuant to the Medium-Term Notes, Series N Second Amended and Restated Distribution Agreement, dated **[**December [•], 2018**]** (the "Distribution Agreement"), between the Company and Goldman Sachs & Co. LLC ("GS&Co.") and the other parties that have been appointed as Agents under the Distribution Agreement (GS&Co. and such other parties, the "Agents").

The Registration Statement relating to the Securities (File No. 333-219206) was filed on July 10, 2017 on Form S-3 in accordance with procedures of the Securities and Exchange Commission (the "Commission") permitting an immediate, delayed or continuous offering of securities pursuant thereto and, if appropriate, a post-effective amendment or prospectus supplement that provides information relating to the terms of the Securities and the manner of their distribution. **[Use the following if the letter is not being delivered at a Time of Delivery —** From time to time, the Securities will be offered by the Prospectus, dated **[**July 10, 2017**]**, relating to various securities of the Company including the Securities (the "Base Prospectus"), as supplemented by the Prospectus Supplement, dated **[**July 10, 2017**]**, relating to the Securities (the "Prospectus Supplement"). The Base Prospectus and the Prospectus Supplement will be further supplemented by pricing supplements, each of which will be dated approximately as of the date of sale of the particular Securities and will furnish information as to the specific terms thereof.**][Use the following if the letter is being delivered at a Time of Delivery —** The Securities have been offered by the Prospectus, dated **[**July 10**,** 2017**]**, (the "Base Prospectus") relating to the Securities, as supplemented by the Prospectus Supplement, dated **[**July 10, 2017**]**, (the "Prospectus Supplement") and the Pricing Supplement No. ..., dated ....., ..., (the "Pricing Supplement").**]** The Base Prospectus and the Prospectus Supplement, as so supplemented, do not necessarily contain a current description of the Company's business and affairs since, pursuant to Form S-3, the Base Prospectus incorporates by reference certain documents filed with the Commission that contain information as of various dates. **[**Among other reports, the Base Prospectus incorporates by reference the Company's **[**Annual Report on Form 10-K for the fiscal year ended December 31, 20..**][**Quarterly Report on Form 10-Q for the quarterly period ended ....., 20..**]**, which was filed with the Commission prior to the time of delivery of this letter.**]**

As counsel for the Company, we reviewed the Registration Statement, the Base Prospectus [and][,] the Prospectus Supplement [and the Pricing Supplement], [**Use the following if the letter is being delivered at a Time of Delivery –** and the documents listed in Schedule A hereto (those documents taken together with the Base Prospectus and the Prospectus Supplement, the "Pricing Disclosure Package")] and participated in discussions with representatives of [GS&Co. and of] the Company, its internal legal department and its accountants. [**Use the following if the letter is being delivered at a Time of Delivery —** Between the date of the Pricing Supplement and the time of delivery of this letter, we participated in further discussions with representatives of [GS&Co. and those of] the Company, its internal legal department and its accountants in which the contents of certain portions of the Base Prospectus, as supplemented by the Prospectus Supplement and the Pricing Supplement, and the Pricing Disclosure Package and certain related matters were discussed, and we reviewed certificates of certain officers of the Company [and a letter addressed to you from the Company's independent accountants].] On the basis of the information that we gained in the course of the performance of such services, considered in the light of our understanding of the applicable law (including the requirements of Form S-3 and the character of the prospectus contemplated thereby) and the experience we have gained through our practice under the Act, we confirm to you that, in our opinion, each part of the Registration Statement, when such part became effective, and the Base Prospectus as supplemented by the Prospectus Supplement [and the Pricing Supplement], as of [**Use the following if the letter is not being delivered at a Time of Delivery or in connection with the filing of an Annual Report on Form 10-K of the Company —** the date of the Prospectus Supplement][**Use the following if the letter is being delivered in connection with the filing of an Annual Report on Form 10-K of the Company —** ....., ..., the date of filing of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 20..][**Use the following if the letter is being delivered at a Time of Delivery —** the date of the Pricing Supplement], appeared on their face to be appropriately responsive, in all material respects relevant to the offering of the Securities [to be issued], to the applicable requirements of the Act, the Trust Indenture Act of 1939 and the rules and regulations of the Commission thereunder. Further, nothing that came to our attention in the course of such review has caused us to believe that, insofar as relevant to the offering of the Securities [to be issued],

(a) any part of the Registration Statement, when such part became effective, contained any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein not misleading, or

[**Use the following if the letter is being delivered at a Time of Delivery —** (b) the Pricing Disclosure Package, as of [__:00] [A/P].M. on …….. , ……. (which you have informed us is a time prior to the time of the first sale of the Securities by any Agent), when considered together with the statements made under the caption ["Specific Terms of the Notes"] in, and the information [in the table] on the front cover of, the Pricing Supplement, contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading or]

[(b)] [(c)] the Base Prospectus, as supplemented by the Prospectus Supplement [and the Pricing Supplement], as of [the date and time of the delivery of this letter][……., ….][the date of the Pricing Supplement], contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

In addition, we do not know of any litigation or any governmental proceeding instituted or threatened against the Company that was required to be disclosed in the Company's **[**Annual Report on Form 10-K for the fiscal year ended December 31, 20..**][**Quarterly Report on Form 10-Q for the quarterly period ended ....., 20..**]** when such Report was filed and was not so disclosed. **[Use the following if the letter is being delivered at a Time of Delivery —** Also, nothing that has come to our attention in the course of the procedures described in the last sentence of the prior paragraph has caused us to believe that the Base Prospectus, as supplemented by the Prospectus Supplement and the Pricing Supplement, as of the date and time of delivery of this letter, contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.**]** We call to your attention, however, the fact that the Company has an internal legal department and that, while we represent the Company on a regular basis, our engagement has been limited to specific matters as to which we were consulted by the Company and, accordingly, our knowledge with respect to litigation and governmental proceedings instituted or threatened against the Company is similarly limited. Also, insofar as the offering of the Securities is concerned, we do not know of any documents that were required to be filed as exhibits to the Company's **[**Annual Report on Form 10-K for the fiscal year ended December 31, 20..**][**Quarterly Report on Form 10-Q for the quarter ended ....., 20..**]** when such Report was filed and were not so filed.

The limitations inherent in the independent verification of factual matters and the character of determinations involved in the registration process are such, however, that we do not assume any responsibility for the accuracy, completeness or fairness of the statements contained in the Registration Statement, the Base Prospectus **[**or**][,]** the Prospectus Supplement **[**or**][,][**the Pricing Supplement**][**or the Pricing Disclosure Package**],** except for those made under the captions "Description of Debt Securities We May Offer", "Legal Ownership and Book-Entry Issuance" and "Plan of Distribution" in the Base Prospectus **[**and**][,]** "Description of Notes We May Offer" and "Supplemental Plan of Distribution" in the Prospectus Supplement **[**and "Description of the Notes" in the Pricing Supplement**]**, in each case insofar as they relate to provisions, therein described, of the Securities, the Indenture and the Distribution Agreement, and except for those made under the caption "United States Taxation" in the Base Prospectus, as supplemented by the Prospectus Supplement, insofar as they relate to provisions, therein described, of U.S. Federal income tax law applicable to the Securities. Also, we do not express any opinion or belief as to the financial statements or other financial data derived from accounting records contained in the Registration Statement, the Base Prospectus **[**or**][,]** the Prospectus Supplement **[**or**][,][**the Pricing Supplement**] [**or the Pricing Disclosure Package**]**, as to the report of management's assessment of the effectiveness of internal control over financial reporting or the auditor's report on the effectiveness of such internal control, each as included in the Registration Statement, the Base Prospectus, or the Prospectus Supplement **[**and**][,][**the Pricing Supplement**] [**and the Pricing Disclosure Package**]**, or as to the statement of the eligibility and qualification of the Trustee under the Indenture.

This letter is furnished by us, as counsel for the Company, to the Agents, solely for the benefit of the Agents in their capacity as such, and may not be relied on by any other person. This letter may not be quoted, referred to or furnished to any purchaser or prospective purchaser of the Securities and may not be used in furtherance of any offer or sale of the Securities.

Very truly yours,

Schedule A

[*List documents other than the Base Prospectus that are included in the Pricing Disclosure Package****]***

Form of Opinion of General Counsel or Associate General Counsel

(i) The Company has been duly incorporated and is validly existing as a corporation under the laws of the State of Delaware;

(ii) The **[**Medium-Term Notes, Series N Second Amended and Restated Distribution Agreement, dated **[**December **[**•**]]**, 2018**]**, between the Company and Goldman Sachs & Co. LLC (the **[**"MTNN Distribution Agreement"**]**) has been duly authorized, executed and delivered by the Company; and

(iii) The Senior Debt Indenture, dated July 16, 2008, between the Company and The Bank of New York Mellon, as amended by the **[**Fourth Supplemental Indenture dated December 31, 2016**]** (the "2008 Indenture"), has been duly authorized, executed and delivered by the Company and the Series has been duly authorized and established in conformity with the 2008 Indenture.

In rendering such opinion, such counsel may state that such counsel expresses no opinion as to the laws of any jurisdiction other than the Federal laws of the United States, the laws of the State of New York and the General Corporation Law of the State of Delaware; that such counsel expresses no opinion as to the effect of laws that restrict transactions between United States persons and citizens or residents of certain foreign countries or specially designated nationals and organizations; that, insofar as such opinion involves factual matters, such counsel has relied upon certificates of officers of the Company and its subsidiaries and certificates of public officials and other sources believed by such counsel to be responsible; and that such counsel has assumed that the 2008 Indenture has been duly authorized, executed and delivered by the Trustee, that the Securities will conform to the forms thereof examined by such counsel (or members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision), that the Trustee's certificates of authentication of the Securities will have been manually signed by one of the Trustee's authorized signatories and that the signatures on all documents examined by him (or members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision) are genuine (assumptions that such counsel has not independently verified). In addition, such counsel may state that such counsel has examined, or has caused members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision to examine, such corporate and partnership records, certificates and other documents, and such questions of law, as such counsel has considered necessary or appropriate for the purposes of such opinion.

ANNEX V

Accountants' Letter

Pursuant to Sections 4(j) and 6(d), as the case may be, of the **[**Medium-Term Notes, Series N Second Amended and Restated Distribution Agreement, dated **[**December **[**•**]]**, 2018**]**, between the Company and Goldman Sachs & Co. LLC (the **[**"MTNN Distribution Agreement"**]**), the Company's independent certified public accountants shall furnish letters to the effect that:

(i) They are an independent registered public accounting firm with respect to the Company within the meaning of the Act and the applicable published rules and regulations thereunder adopted by the Securities and Exchange Commission (the "SEC") and the Public Company Accounting Oversight Board (United States) (the "PCAOB").;

(ii) In their opinion, the financial statements and any supplementary financial information and schedules (and, if applicable, financial forecasts and/or pro forma financial information) audited or examined by them and included or incorporated by reference in the Registration Statement or the Prospectus comply as to form in all material respects with the applicable accounting requirements of the Act or the Exchange Act, as applicable, and the related published rules and regulations thereunder; and, if applicable, they have made a review in accordance with standards established by the PCAOB of the consolidated interim financial statements, selected financial data, pro forma financial information, financial forecasts and/or condensed financial statements derived from audited financial statements of the Company for the periods specified in such letter, as indicated in their reports thereon, copies of which have been furnished to the Agents;

(iii) They have made a review in accordance with standards established by the PCAOB of the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included in the Company's Quarterly Report(s) on Form 10-Q covering periods after the latest full fiscal year and incorporated by reference into the Prospectus as indicated in their reports thereon, copies of which have been furnished to the Agents; and on the basis of specified procedures including inquiries of officials of the Company who have responsibility for financial and accounting matters regarding whether the unaudited condensed consolidated financial statements referred to in paragraph (vi)(A)(i) below comply as to form in all material respects with the applicable accounting requirements of the Act and the Exchange Act and the related published rules and regulations, nothing came to their attention that caused them to believe that the unaudited condensed consolidated financial statements do not comply as to form in all material respects with the applicable accounting requirements of the Act and the Exchange Act and the related published rules and regulations;

(iv) The unaudited selected financial information with respect to the consolidated results of operations and financial position of the Company for the five most recent fiscal years included in the Prospectus and/or included or incorporated by reference in Item 6 of the Company's Annual Report on Form 10-K for the most recent fiscal year agrees with the corresponding amounts (after restatement where applicable) in the audited consolidated financial statements for such fiscal years;

(v) They have compared the information in the Prospectus under selected captions with the disclosure requirements of Regulation S-K and on the basis of limited procedures specified in such letter nothing came to their attention as a result of the foregoing procedures that caused them to believe that this information does not conform in all material respects with the disclosure requirements of Items 301, 302 and 503(d), respectively, of Regulation S-K;

(vi) On the basis of limited procedures, not constituting an examination in accordance with generally accepted auditing standards, consisting of a reading of the unaudited financial statements and other information referred to below, a reading of the latest available interim financial statements of the Company and its subsidiaries, inspection of the minute books of the Company and its subsidiaries since the date of the latest audited financial statements included or incorporated by reference in the Prospectus as amended or supplemented, inquiries of officials of the Company and its subsidiaries responsible for financial and accounting matters and such other inquiries and procedures as may be specified in such letter, nothing came to their attention that caused them to believe that:

(A) (i) the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included or incorporated by reference in the Company's Quarterly Report(s) on Form 10-Q incorporated by reference in the Prospectus do not comply as to form in all material respects with the applicable accounting requirements of the Exchange Act and the related published rules and regulations, or (ii) any material modifications should be made to the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included or incorporated by reference in the Prospectus and/or included in the Company's Quarterly Report(s) on Form 10-Q incorporated by reference in the Prospectus for them to be in conformity with generally accepted accounting principles;

(B) any other unaudited income statement data and balance sheet items included in the Prospectus do not agree with the corresponding items in the unaudited consolidated financial statements from which such data and items were derived, and any such unaudited data and items were not determined on a basis substantially consistent with the basis for the corresponding amounts in the audited consolidated financial statements included or incorporated by reference in the Company's Annual Report on Form 10-K for the most recent fiscal year;

(C) the unaudited financial statements which were not included in the Prospectus but from which were derived the unaudited condensed financial statements referred to in clause (A) and any unaudited income statement data and balance sheet items included in

the Prospectus as most recently amended or supplemented and referred to in clause (B) were not determined on a basis substantially consistent with the basis for the audited financial statements included or incorporated by reference in the Company's Annual Report on Form 10-K for the most recent fiscal year;

(D) any unaudited pro forma consolidated condensed financial statements included or incorporated by reference in the Prospectus do not comply as to form in all material respects with the applicable accounting requirements of the Act and the published rules and regulations thereunder, or the pro forma adjustments have not been properly applied to the historical amounts in the compilation of those statements; and

(E) as of a specified date not more than five days prior to the date of such letter, there have been any decrease in shareholders' equity (other than issuances or forfeitures of restricted stock units issued under the Company's Stock Incentive Plan and repurchases of common stock in accordance with the Company's common stock repurchase program or issuances of stock associated with the Company's employee stock option plans), any increase in unsecured long-term borrowings of the Company and its subsidiaries, or any decreases in consolidated total current assets or other items specified by the Agents, or any increases in any items specified by the Agents, in each case as compared with amounts shown in the latest balance sheet included or incorporated by reference in the Prospectus, except in each case for changes, increases or decreases which the Prospectus discloses have occurred or may occur or which are described in such letter.

(vii) In addition to the audit referred to in their report(s) included or incorporated by reference in the Prospectus and the limited procedures, inspection of minute books, inquiries and other procedures referred to in paragraphs (iii) and (vi) above, they have carried out certain specified procedures, not constituting an audit in accordance with generally accepted auditing standards, with respect to certain amounts, percentages and financial information specified by the Agents which are derived from the general accounting records of the Company and its subsidiaries which appear in the Prospectus (excluding documents incorporated by reference), or in Part II of, or in exhibits and schedules to, the Registration Statement specified by the Agents or in documents incorporated by reference in the Prospectus specified by the Agents, and have compared certain of such amounts, percentages and financial information with the accounting records of the Company and its subsidiaries and have found them to be in agreement.

All references in this Annex V to the Prospectus shall be deemed to refer to the Prospectus (including the documents incorporated by reference therein) as defined in the MTNN Distribution Agreement as of the Recommencement Date referred to in Section 6(d) thereof and to the Prospectus as amended or supplemented (including the documents incorporated by reference therein) as of the date of the amendment, supplement or incorporation or the Time of Delivery relating to the Terms Agreement requiring the delivery of such letter under Section 4(j) thereof.

Exhibit 1.2

The Goldman Sachs Group, Inc.

[Title of Subordinated Debt Securities]

[Form of]

Underwriting Agreement

_____, 20__

Goldman Sachs & Co. LLC,
As Representative of the several Underwriters
named in Schedule I hereto,
200 West Street,
New York, New York 10282.

Ladies and Gentlemen:

The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters") an aggregate of $_____ principal amount of the **[Title of Subordinated Debt Securities]** specified above (the "Securities"), which are further described in Schedule III hereto.

The Company acknowledges and agrees that Goldman Sachs & Co. LLC ("GS&Co.") may use the Prospectus (as defined below) in connection with offers and sales of the Securities as contemplated in the Prospectus under the caption "Plan of Distribution — Market-Making Resales by Affiliates" ("Secondary Market Transactions"). The Company further acknowledges and agrees that GS&Co. is under no obligation to effect any Secondary Market Transactions and, if it does so, it may discontinue effecting such transactions at any time without providing any notice to the Company. The term "Underwriter", whenever used in this Agreement, shall include GS&Co., whether acting in its capacity as an Underwriter or acting in connection with a Secondary Market Transaction, except as may be specifically provided otherwise herein.

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) An "automatic shelf registration statement" as defined under Rule 405 under the Securities Act of 1933, as amended (the "Act"), on Form S-3 (File No. 333—**[ ]**) in respect of the Securities has been filed with the Securities and Exchange Commission (the "Commission") not earlier than three years prior to the date hereof; such registration statement, and any post-effective amendment thereto, became effective on filing; and no stop order suspending the effectiveness of such registration statement or any part thereof has been issued and no proceeding for that purpose has been initiated or threatened by the Commission, and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act has been received by the Company (the base prospectus filed as part of such registration statement, in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the "Base Prospectus"; any preliminary prospectus (including any preliminary prospectus supplement) relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of such registration statement, including all exhibits thereto but excluding Form T-1 and including any prospectus supplement relating to the Securities that is filed with the Commission and deemed by virtue of Rule 430B to be part of such registration statement, each as amended at the time such part of the registration statement became effective, are hereinafter collectively called the "Registration Statement"; the Base Prospectus, as amended and supplemented immediately prior to the Applicable Time (as defined in Section 1 (c) hereof), is hereinafter called the "Pricing Prospectus"; the form of the final prospectus relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof is hereinafter called the "Prospectus"; any reference herein to the Base Prospectus, the Pricing Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Act, as of the date of such prospectus; any reference to any amendment or supplement to the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any post-effective amendment to the Registration Statement, any prospectus supplement relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act and any documents filed under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and incorporated therein, in each case after the date of the Base Prospectus, such Preliminary Prospectus or the Prospectus, as the case may be; and any reference to any amendment to the Registration Statement shall be deemed to refer to and include any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act after the effective date of the Registration Statement that is incorporated by reference in the Registration Statement);

(b) No order preventing or suspending the use of any Preliminary Prospectus or any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Securities (an "Issuer Free Writing Prospectus") has been issued by the Commission, and each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"), and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein;

(c) For the purposes of this Agreement, the "Applicable Time" is : m (Eastern time) on the date of this Agreement; the Pricing Prospectus together with the statements under the caption **[**"Specific Terms of the Subordinated Notes – Terms of the Subordinated Notes"**]** in, and the information in the **[**table on the**]** front cover of, the Prospectus, taken together with such other information, if any, set forth in Schedule II (b) hereto (collectively, the "Pricing Disclosure Package") as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus listed on Schedule II(a) hereto (if any) does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus and each such Issuer Free Writing Prospectus, as supplemented by and taken together with the Pricing Disclosure Package as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in an Issuer Free Writing Prospectus in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein;

(d) The documents incorporated by reference in the Pricing Prospectus and the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; any further documents so filed and incorporated by reference in the Prospectus or any further amendment or supplement thereto, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder and will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein; and no such documents were filed with the Commission since the Commission's close of business on the business day immediately prior to the date of this Agreement and prior to the execution of this Agreement, except as set forth on Schedule II(b) hereto;

(e) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the Trust Indenture Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement and as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein;

(f) Neither the Company nor any of its subsidiaries that are listed in the Company's latest annual report on Form 10-K pursuant to the requirements of Form 10-K and Item 601(b)(21) of the Commission's Regulation S-K and are "significant subsidiaries" as defined in Rule 1-02(w) of the Commission's Regulation S-X (the "Significant Subsidiaries") has sustained since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus, there has not been any material adverse change in the capital stock or long-term debt of the Company or any of its Significant Subsidiaries or any material adverse change, or any development involving a prospective material adverse change, in or affecting the general affairs, management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries, otherwise than as set forth or contemplated in the Pricing Prospectus;

(g) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with power and authority (corporate and other) to own its properties and conduct its business as described in the Pricing Prospectus;

(h) The Company has an authorized capitalization as set forth in the Pricing Prospectus, and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable;

(i) The Securities have been duly authorized and, when issued and delivered pursuant to this Agreement, will have been duly executed, authenticated, issued and delivered and will constitute valid and legally binding obligations of the Company entitled to the benefits provided by the Subordinated Debt Indenture dated as of February 20, 2004 (as amended and supplemented through the date hereof and by the **[ ]** Supplemental Subordinated Debt Indenture thereto, dated **[ ]** and as it may be further amended or supplemented from time to time, the "2004 Indenture"), between the Company and The Bank of New York Mellon, as Trustee (including any successor trustee, the "Trustee"), under which they are to be issued; the 2004 Indenture has been duly authorized and duly qualified under the Trust Indenture Act and constitutes a valid and legally binding instrument, enforceable in accordance with its terms, subject, as to enforcement, to bankruptcy, insolvency, reorganization and other laws of general applicability relating to or affecting creditors' rights and to general equity principles; and the Securities and the 2004 Indenture will conform to the descriptions thereof in the Prospectus;

(j) The issue and sale of the Securities, the compliance by the Company with all of the provisions of the Securities, the 2004 Indenture and this Agreement and the consummation of the transactions herein and therein contemplated will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, nor will such action result in any violation of the provisions of the Restated Certificate of Incorporation or the Amended and Restated By-laws of the Company or any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Securities by the Company or the consummation by the Company of the transactions contemplated by this Agreement or the 2004 Indenture except such as have been obtained under the Act and the Trust Indenture Act and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Securities by the Underwriters;

(k) Neither the Company nor any of its Significant Subsidiaries is in violation of its organizational documents or in default in the performance or observance of any material obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound;

(l) The statements set forth in the Pricing Prospectus and the Prospectus under the captions “Specific Terms of the Subordinated Notes”, “Additional Information About the Subordinated Notes”, “Description of Debt Securities We May Offer” and “Legal Ownership and Book-Entry Issuance”, insofar as they purport to constitute a summary of the terms of the Securities, and under the captions “United States Taxation”, “Specific Terms of the Subordinated Notes – United States Federal Income Tax Consequences” and “Plan of Distribution”, insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair;

(m) Other than as set forth in the Pricing Prospectus, there are no legal or governmental proceedings pending to which the Company or any of its subsidiaries is a party or of which any property of the Company or any of its subsidiaries is the subject which, if determined adversely to the Company or any of its subsidiaries, would individually or in the aggregate have a material adverse effect on the current or future consolidated financial position, stockholders' equity or results of operations of the Company and its subsidiaries; and, to the best of the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or threatened by others;

(n) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof, will not be an "investment company", as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(o) (A) (i) At the time of filing the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), and (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Act) made any offer relating to the Securities in reliance on the exemption of Rule 163 under the Act, the Company was a "well-known seasoned issuer" as defined in Rule 405 under the Act; and (B) at the earliest time after the filing of the Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Securities, the Company was not an "ineligible issuer" as defined in Rule 405 under the Act;

(p) The Company and its Significant Subsidiaries possess all authorizations issued by the appropriate Federal, state and foreign governments, governmental or regulatory authorities, self-regulatory organizations and all courts or other tribunals, and are members in good standing of each Federal, state or foreign exchange, board of trade, clearing house or association and self-regulatory or similar organization necessary to conduct their respective businesses as described in the Pricing Prospectus, except as would not, individually or in the aggregate, have a material adverse effect on the prospects, financial position, stockholders' equity or results of operations of the Company and its subsidiaries;

(q) PricewaterhouseCoopers LLP, who certified certain financial statements of the Company and its subsidiaries, and audited the Company's internal control over financial reporting, is an independent registered public accounting firm as required by the Act and the rules and regulations of the Commission thereunder;

(r) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies with the requirements of the Exchange Act and has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Except as disclosed in the Pricing Prospectus, the Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting;

(s) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(t) Since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus, there has been no change in the Company's internal control over financial reporting that has materially adversely affected, or is reasonably likely to materially adversely affect, the Company's internal control over financial reporting;

(u) The Company has implemented an anti-bribery program including policies and procedures reasonably designed to ensure compliance with applicable law, including without limitation the Foreign Corrupt Practices Act of 1977 and the Bribery Act 2010 of the United Kingdom, and will maintain such program, as modified from time to time, during the term of this Agreement. The Company will not use the proceeds of the offering of the Securities hereunder in a manner that will violate applicable anti-bribery laws;

(v) The Company has developed and implemented written policies, procedures and internal controls reasonably designed to ensure compliance with applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT Act of 2001, and the regulations promulgated thereunder, and the anti-money laundering laws of the various jurisdictions in which the Company and its regulated subsidiaries conduct business; and

(w) The Company has developed and implemented written policies, procedures and internal controls reasonably designed to ensure compliance with any economic sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury, or other relevant economic sanctions authority (collectively, "Sanctions"), and the Company will not use the proceeds of the offering of the Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions (except as may be authorized by the relevant economic sanctions authority) or (ii) in any other manner that will result in a violation of Sanctions by the Company.

2. Subject to the terms and conditions herein set forth, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price of % of the principal amount thereof, plus accrued interest, if any, from , 20 to the Time of Delivery (as defined below) hereunder, the principal amount of Securities set forth opposite the name of such Underwriter in Schedule I hereto.

3. Upon the authorization by you of the release of the Securities, the several Underwriters propose to offer the Securities for sale upon the terms and conditions set forth in the Prospectus.

4. (a) The Securities to be purchased by each Underwriter hereunder will be represented by one or more definitive global Securities in book-entry form which will be deposited by or on behalf of the Company with The Depository Trust Company ("DTC") or its designated custodian. The Company will deliver the Securities to GS&Co., for the account of each Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to GS&Co. at least forty-eight hours in advance, by causing DTC to credit the Securities to the account of GS&Co. at DTC. The Company will cause the certificates representing the Securities to be made available to GS&Co. for

checking prior to the Time of Delivery (as defined below) at the office of DTC or its designated custodian (the "Designated Office"). The time and date of such delivery and payment shall be 9:30 a.m., New York City time, on , 20 or at such other place and time and date as GS&Co. and the Company may agree upon in writing. Such time and date are herein called the "Time of Delivery".

(b) The documents to be delivered at the Time of Delivery by or on behalf of the parties hereto pursuant to Section 9 hereof, including the cross-receipt for the Securities and any additional documents requested by the Underwriters pursuant to Section 9(i) hereof, will be delivered at the offices of Sullivan & Cromwell LLP, 125 Broad St., New York, New York 10004 (the "Closing Location"), and the Securities will be delivered at the Designated Office, all at the Time of Delivery. A meeting will be held at the Closing Location at p.m., New York City time, on the New York Business Day next preceding the Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file the Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the date of this Agreement; to make no further amendment or any supplement to the Registration Statement, the Base Prospectus or the Prospectus prior to the Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; if requested by GS&Co. prior to the Applicable Time, to prepare a final term sheet, containing solely a description of the Securities, in substantially the form set forth in Schedule III hereto and to file such term sheet pursuant to Rule 433(d) under the Act within the time required by such Rule; to file promptly all other material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act

subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required in connection with the offering or sale of the Securities (including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period (as defined in Section 6(a) hereof)), and during such same period to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any supplement to the Prospectus or any amended Prospectus has been filed with the Commission, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Securities, of any notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act, of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any such stop order or of any such order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Securities or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order; and in the event of any such issuance of a notice of objection, promptly to take such steps including, without limitation, amending the Registration Statement or filing a new registration statement, at its own expense, as may be necessary to permit offers and sales of the Securities by the Underwriters (references herein to the Registration Statement shall include any such amendment or new registration statement);

(b) If required by Rule 430B(h) under the Act, to prepare a form of prospectus in a form approved by you and to file such form of prospectus pursuant to Rule 424(b) under the Act not later than may be required by Rule 424(b) under the Act; and to make no further amendment or supplement to such form of prospectus which shall be disapproved by you promptly after reasonable notice thereof;

(c) If by the third anniversary (the “Renewal Deadline”) of the initial effective date of the Registration Statement, any of the Securities remain unsold by the Underwriters, the Company will file, if it has not already done so and is eligible to do so, a new automatic shelf registration statement relating to the Securities, in a form satisfactory to you. If at the Renewal Deadline the Company is no longer eligible to file an automatic

shelf registration statement, the Company will, if it has not already done so, file a new shelf registration statement relating to the Securities, in a form satisfactory to you and will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the public offering and sale of the Securities to continue as contemplated in the expired registration statement relating to the Securities. References herein to the Registration Statement shall include such new automatic shelf registration statement or such new shelf registration statement, as the case may be;

(d) Promptly from time to time to take such action as you may reasonably request to qualify the Securities for offering and sale under the securities laws of such jurisdictions as you may request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Securities (including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period), provided that in connection therewith the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction;

(e) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Securities (or, in the case of GS&Co., in connection with any Secondary Market Transactions during the Secondary Transactions Period, whether before or after such expiration) and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Act, the Exchange Act or the Trust Indenture Act, to notify you and upon your request to file such document

and to prepare and furnish without charge to each Underwriter and to any dealer in securities as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Securities at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act (it being understood, however, that the preceding clause, rather than this clause, shall apply with respect to GS&Co. in connection with any Secondary Market Transactions during the Secondary Transactions Period); provided, however, that the Company may elect, upon notice to GS&Co., not to comply with this paragraph (e) with respect to any Secondary Market Transaction, but only for a period or periods that the Company reasonably determines are necessary in order to avoid premature disclosure of material, non-public information, unless, notwithstanding such election, such disclosure would otherwise be required under this Agreement; and provided, further, that no such period or periods described in the preceding proviso shall exceed 90 days in the aggregate during any period of 12 consecutive calendar months. Upon receipt of any such notice, GS&Co. shall cease using the Prospectus or any amendment or supplement thereto in connection with Secondary Market Transactions until it receives notice from the Company that it may resume using such document (or such document as it may be amended or supplemented);

(f) To make generally available to its securityholders as soon as practicable, but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(g) During the period beginning from the date hereof and continuing to and including the later of (i) the termination of trading restrictions for the Securities as notified to the Company by you and (ii) the Time of Delivery, not to offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, except as provided hereunder, any debt securities of the Company that are substantially similar to the Securities, without your prior written consent;

(h) To pay the required Commission filing fees relating to the Securities within the time required by Rule 456(b)(1) under the Act without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) under the Act; and

(i) To use the net proceeds received by it from the sale of the Securities pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption "Use of Proceeds".

6. The Company agrees with GS&Co., with respect to the issuance of the Securities:

(a) To make no amendment or supplement to the Registration Statement, the Base Prospectus or the Prospectus during the Secondary Transactions Period which shall be disapproved by GS&Co. promptly after reasonable notice thereof. The "Secondary Transactions Period" means the period beginning on the date hereof and continuing for as long as may be required under applicable law, in the reasonable judgment of GS&Co. after consultation with the Company, in order to offer and sell any such Securities in Secondary Market Transactions as contemplated by the Pricing Prospectus;

(b) During the Secondary Transactions Period, to furnish to GS&Co. copies of all reports or other communications (financial or other) furnished to stockholders generally, and to deliver to GS&Co. (i) as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which the Securities or any class of securities of the Company is listed; and (ii) such additional information concerning the business and financial condition of the Company as GS&Co. may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company and its subsidiaries are consolidated in reports furnished to its stockholders generally or to the Commission); and

(c) Each time the Registration Statement, the Base Prospectus or the Prospectus shall be amended or supplemented during the Secondary Transactions Period, to furnish or cause to be furnished to GS&Co., upon its request, written opinions of counsel for the Company, a letter from the independent accountants who have certified the financial statements included in the Registration Statement as then amended and certificates of officers of the Company, in each case in form and substance reasonably satisfactory to GS&Co., all to the effect specified in subsections (c), (d) and (i), respectively, of Section 9 hereof (as modified to relate to the Registration Statement and the Prospectus as then amended or supplemented).

Notwithstanding the foregoing provisions, the Company may elect, upon notice to GS&Co., not to comply with this Section 6 with respect to any Secondary Market Transaction, but only for a period or periods that the Company reasonably determines are necessary in order to avoid premature disclosure of material, non-public information, unless, notwithstanding such election, such disclosure would otherwise be required under this Agreement; and provided, further, that no such period or periods described in the preceding proviso shall exceed 90 days in the aggregate during any period of 12 consecutive calendar months. Upon receipt of any such notice, GS&Co. shall cease using the Prospectus or any amendment or supplement thereto in connection with Secondary Market Transactions until it receives notice from the Company that it may resume using such document (or such document as it may be amended or supplemented).

7. (a) (i) The Company and each Underwriter agree that the Underwriters may prepare and use one or more preliminary or final term sheets relating to the Securities containing customary information;

(ii) Each Underwriter represents that, other than as permitted under subparagraph (a)(i) above, it has not made and will not make any offer relating to the Securities that would constitute a “free writing prospectus” as defined in Rule 405 under the Act without the prior consent of the Company and GS&Co. and that Schedule II(a) hereto is a complete list of any free writing prospectus for which the Underwriters have received such consent; and

(iii) The Company represents and agrees that it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus without the prior consent of GS&Co. and that Schedule II(a) hereto is a complete list of any Issuer Free Writing Prospectuses for which the Company has received such consent;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus any event occurred or occurs as a result of which such Issuer Free Writing Prospectus would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would

include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to GS&Co. and, if requested by GS&Co., will prepare and furnish without charge to each Underwriter (or, in the case of any Secondary Market Transaction, to GS&Co.) an Issuer Free Writing Prospectus or other document which will correct such conflict, statement or omission; provided, however, that this representation and warranty shall not apply to any statements or omissions in an Issuer Free Writing Prospectus made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein; and

(d) Each Underwriter shall ensure that payments in respect of the Securities for the benefit of a holder of Securities are not subject to withholding under Sections 1471 through 1474 of the U.S. Internal Revenue Code of 1986 (or any regulations or guidance thereunder or any agreements entered into in respect thereof) as a result of such Underwriter (or any affiliated party through which the holder holds Securities) being subject to such withholding on the payment.

8. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Securities under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, the Base Prospectus, any Preliminary Prospectus, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, the 2004 Indenture, the Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Securities; (iii) all expenses in connection with the qualification of the Securities for offering and sale under state securities laws as provided in Section 5(d) hereof, including the fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky survey; (iv) any fees charged by securities rating services for rating the Securities; (v) any filing fees incident to, and the fees and disbursements of counsel for the Underwriters in connection with, any required review by the Financial Industry Regulatory Authority, Inc. of the terms of the sale of the Securities; (vi) the cost of preparing the Securities; (vii) the fees and expenses of the Trustee and any agent of the Trustee and the fees and disbursements of counsel for the Trustee in connection with the 2004 Indenture and the Securities;

and (viii) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section. It is understood, however, that, except as provided in this Section, and Sections 10 and 14 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, transfer taxes on resale of any of the Securities by them, the cost of preparing and distributing any term sheet prepared by any Underwriter, and any advertising expenses connected with any offers they may make.

9. The obligations of the Underwriters hereunder shall be subject, in your discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of the Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; any final term sheet contemplated by Section 5(a) hereof, and any other material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time periods prescribed for such filings by Rule 433; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission and no notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act shall have been received; no stop order suspending or preventing the use of the Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Counsel for the Underwriters shall have furnished to you a written opinion and letter, dated the Time of Delivery, to the effect set forth in Annex I hereto;

(c) A General Counsel or Associate General Counsel for the Company shall have furnished to you his or her written opinion, dated the Time of Delivery, in form and substance satisfactory to you, to the effect set forth in Annex II hereto;

(d) Within two business days after the date hereof and at the Time of Delivery for the Securities, the independent accountants shall have furnished to you a letter, dated within two business days after the date hereof, and a letter, dated such Time of Delivery, respectively, to the effect set forth in Annex III hereto, and with respect to such letter dated such Time of Delivery, as to such other matters as you may reasonably request, and in form and substance satisfactory to GS&Co.;

(e) (i) Neither the Company nor any of its Significant Subsidiaries shall have sustained since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock or long-term debt of the Company or any of its Significant Subsidiaries or any change, or any development involving a prospective change, in or affecting the general affairs, management, financial position, stockholders' equity or results of operations of the Company and its Significant Subsidiaries, otherwise than as set forth or contemplated in the Pricing Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in the judgment of GS&Co. so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Securities on the terms and in the manner contemplated in the Prospectus;

(f) On or after the Applicable Time (i) no downgrading shall have occurred in the rating accorded the Company's debt securities by any "nationally recognized statistical rating organization", as that term is defined by the Commission for purposes of Section 3(a)(62) of the Exchange Act, and (ii) no such organization shall have publicly announced that it has under surveillance or review, with possible negative implications, its rating of any of the Company's debt securities;

(g) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange; (ii) a suspension or material limitation in trading in the Company's securities on the New York Stock Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in the judgment of GS&Co. makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Securities on the terms and in the manner contemplated in the Prospectus;

(h) The Company shall have complied with the provisions of Section 5(e) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement; and

(i) The Company shall have furnished or caused to be furnished to you at the Time of Delivery (i) certificates of officers of the Company satisfactory to you as to the accuracy of the representations and warranties of the Company herein at and as of such time, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such time, as to the matters set forth in subsections (a) and (e) of this Section and as to such other matters as you may reasonably request and (ii) written confirmation of the ratings assigned to the Securities.

10. (a) The Company will indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus or any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Act, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; provided, however, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by any Underwriter through GS&Co. expressly for use therein.

(b) Each Underwriter will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based

upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, or any amendment or supplement thereto, the Pricing Prospectus or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, or the Prospectus or any such amendment or supplement thereto, the Pricing Prospectus or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by such Underwriter through GS&Co. expressly for use therein; and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party shall not relieve it from any liability which it may have to any indemnified party otherwise than under such subsection. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 10 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Securities. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law or if the indemnified party failed to give the notice required under subsection (c) above, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages

which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 10 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer affiliate of any Underwriter; and the obligations of the Underwriters under this Section 10 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company and to each person, if any, who controls the Company within the meaning of the Act.

11. (a) If any Underwriter shall default in its obligation to purchase the Securities which it has agreed to purchase hereunder, you may in your discretion arrange for you or another party or other parties to purchase such Securities on the terms contained herein. If within thirty-six hours after such default by any Underwriter you do not arrange for the purchase of such Securities, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to you to purchase such Securities on such terms. In the event that, within the respective prescribed periods, you notify the Company that you have so arranged for the purchase of such Securities, or the Company notifies you that it has so arranged for the purchase of such Securities, you or the Company shall have the right to postpone the Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in your opinion may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Securities.

(b) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate principal amount of such Securities which remains unpurchased does not exceed one-eleventh of the aggregate principal amount of all the Securities, then the Company shall have

the right to require each non-defaulting Underwriter to purchase the principal amount of Securities which such Underwriter agreed to purchase hereunder and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the principal amount of Securities which such Underwriter agreed to purchase hereunder) of the Securities of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate principal amount of Securities which remains unpurchased exceeds one-eleventh of the aggregate principal amount of all the Securities, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Securities of a defaulting Underwriter or Underwriters, then this Agreement shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 8 hereof and the indemnity and contribution agreements in Section 10 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

12. The respective indemnities, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any controlling person of any Underwriter, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Securities.

13. Anything herein to the contrary notwithstanding, the indemnity agreement of the Company in subsection (a) of Section 10 hereof, the representations and warranties in subsections (b) and (c) of Section 1 hereof and any representation or warranty as to the accuracy of the Registration Statement or any Prospectus contained in any certificate furnished by the Company pursuant to Section 9 hereof, insofar as they may constitute a basis for indemnification for liabilities (other than payment by the Company of expenses incurred or paid in the successful defense of any action, suit or proceeding) arising under the Act, shall not extend to the extent of any interest therein of a controlling person or partner of an Underwriter who is a director or officer of the Company who signed the Registration Statement or a controlling person of the Company when the Registration Statement has become effective, except in each case to the extent that an interest of such character shall have been determined

by a court of appropriate jurisdiction as not against public policy as expressed in the Act. Unless in the opinion of counsel for the Company the matter has been settled by controlling precedent, the Company will, if a claim for such indemnification is asserted, submit to a court of appropriate jurisdiction the question of whether such interest is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

14. If this Agreement shall be terminated pursuant to Section 11 hereof, the Company shall not then be under any liability to any Underwriter except as provided in Sections 8 and 10 hereof; but, if for any other reason, the Securities are not delivered by or on behalf of the Company as provided herein, the Company will reimburse the Underwriters through you for all out-of-pocket expenses approved in writing by you, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Securities, but the Company shall then be under no further liability to any Underwriter except as provided in Sections 8 and 10 hereof.

15. In all dealings hereunder, GS&Co. (and only GS&Co.) shall act on behalf of each of the Underwriters (including with respect to any determination as to whether any condition to the obligations of the Underwriters has been satisfied, any representation or agreement of the Company has been complied with or any such condition, representation or agreement may be waived), and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by GS&Co.

All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to the Representative, c/o GS&Co., at 200 West Street, New York, New York 10282, Attention: Registration Department; and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: Secretary; provided, however, that any notice to an Underwriter pursuant to Section 10(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire, or telex constituting such Questionnaire, which address will be supplied to the Company by you upon request. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

In accordance with the requirements of the USA PATRIOT Act of 2001, the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

16. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 10 and 12 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Securities from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

17. Time shall be of the essence of this Agreement. As used herein, the term "business day" shall mean any day when the Commission's office in Washington, D.C. is open for business.

18. The Company acknowledges and agrees that (i) the purchase and sale of the Securities pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement and (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate. The Company agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

19. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

20. **This Agreement shall be governed by and construed in accordance with the laws of the State of New York.**

21. The Company and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

22. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such respective counterparts shall together constitute one and the same instrument.

23. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, "tax structure" is limited to any facts that may be relevant to that treatment.

24. (a) (i) In the event that any party that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such party of this Agreement and any interest and obligation in or under this Agreement will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(ii) In the event that any party that is a Covered Entity or any BHC Act Affiliate of such party becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such party are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States. The requirements of this Section 24(a) apply notwithstanding the following Section 24(b).

(b) (i) Notwithstanding anything to the contrary in this Agreement or any other agreement, but subject to the requirements of Section 24(a), no party to this Agreement shall be permitted to exercise any Default Right against a party that is a Covered Entity with respect to this Agreement that is related, directly or indirectly, to a BHC Act Affiliate of such party becoming subject to an Insolvency Proceeding, except to the extent the exercise of such Default Right would be permitted under the creditor protection provisions of 12 C.F.R. § 252.84, 12 C.F.R. § 47.5, or 12 C.F.R. § 382.4, as applicable.

(ii) After a BHC Act Affiliate of a party that is a Covered Entity has become subject to an Insolvency Proceeding, if any party to this Agreement seeks to exercise any Default Right against such Covered Entity with respect to this Agreement, the party seeking to exercise a Default Right shall have the burden of proof, by clear and convincing evidence, that the exercise of such Default Right is permitted hereunder.

(c) For purposes of this Section 24,

(i) "**BHC Act Affiliate**" of a party means an "affiliate" (as such term is defined under, and interpreted in accordance with, 12 U.S.C. 1841 (k)) of such party;

(ii) "**Covered Entity**" means any of the following: (x) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (y) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (z) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b);

(iii) "**Default Right**" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1 as applicable;

(iv) "**Insolvency Proceeding**" means a receivership, insolvency, liquidation, resolution, or similar proceeding; and

(v) "**U.S. Special Resolution Regime**" means each of (y) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (z) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

If the foregoing is in accordance with your understanding, please sign and return to us four counterparts hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

Very truly yours,

The Goldman Sachs Group, Inc.

By: _____
Name:
Title:

Accepted as of the date hereof:

Goldman Sachs & Co. LLC

By: _____
Name:
Title:

On behalf of each of the Underwriters

SCHEDULE I

Underwriters	Principal Amount of Securities to be Purchased
Goldman Sachs & Co. LLC	
[Names of other Underwriters]	
Total	

SCHEDULE II

(a) Issuer Free Writing Prospectuses:

- Final term sheet in the form set forth in Schedule III hereto, but only if the Company is obligated to prepare and file such term sheet pursuant to Section 5(a) hereof.

(b) Additional Information Incorporated by Reference: [•]

SCHEDULE III

The Goldman Sachs Group, Inc.

Title of Securities:

Indenture:

Aggregate Principal Amount to be Offered:

Price to Public:

Settlement Date:

Representatives of the Underwriters:

Purchase Price by Underwriters:

Maturity Date:

Interest Rate:

Interest Payment Dates:

Interest Reset Dates:

Defeasance:

Redemption Provisions:

Subordination:

Limited Right of Acceleration:

[Other Provisions:]

The issuer has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternately, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by calling 1-201-793-5170.

ANNEX I

Form of Opinion of Counsel to the Underwriters

[date**]**

Goldman Sachs & Co. LLC
As Representative of the
Several Underwriters,
c/o Goldman Sachs & Co. LLC,
200 West Street,
New York, New York 10282.

Ladies and Gentlemen:

In connection with the several purchases today by you and the other Underwriters named in Schedule I to the Underwriting Agreement, dated •, 20… (the "Underwriting Agreement"), between The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), and you, as Representative of the several Underwriters named therein (the "Underwriters"), of $..... principal amount of the Company's **[...%][**Floating Rate**]** Notes due 20… (the "Securities") issued pursuant to the Subordinated Debt Indenture thereto, dated as of February 20, 2004 (as amended by the **[ ]** Supplemental Subordinated Debt Indenture, dated **[ ]**, and as it may be further amended or supplemented from time to time, the "2004 Indenture"), between the Company and The Bank of New York Mellon, as Trustee (the "Trustee"), we, as counsel for the several Underwriters, have examined such corporate records, certificates and other documents, and such questions of law, as we have considered necessary or appropriate for the purposes of this opinion. Upon the basis of such examination, we advise you that, in our opinion:

(1) The Company has been duly incorporated and is an existing corporation in good standing under the laws of the State of Delaware.

(2) All regulatory consents, authorizations, approvals and filings required to be obtained or made by the Company under the U.S. Bank Holding Company Act of 1956, the U.S. Federal Reserve Act and the New York State Banking Laws, including, in each case, the regulations adopted thereunder (collectively, the "Banking Laws"), for the issuance, sale and delivery of the Securities by the Company to the Underwriters have been obtained or made.

(3) All regulatory consents, authorizations, approvals and filings required to be obtained or made by the Company under the Other Covered Laws (as defined below) for the issuance, sale and delivery of the Securities by the Company to the Underwriters have been obtained or made.

(4) The issuance of the Securities in accordance with the 2004 Indenture and the sale of the Securities by the Company to the Underwriters pursuant to the Underwriting Agreement do not, and the performance by the Company of its obligations under the Securities, the 2004 Indenture and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Securities, will not, violate the Banking Laws.

(5) The issuance of the Securities in accordance with the 2004 Indenture and the sale of the Securities by the Company to the Underwriters pursuant to the Underwriting Agreement do not, and the performance by the Company of its obligations under the Securities, the 2004 Indenture and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Securities, will not, violate the Other Covered Laws.

(6) The issuance of the Securities in accordance with the 2004 Indenture and the sale of the Securities by the Company to the Underwriters pursuant to the Underwriting Agreement do not, and the performance by the Company of its obligations under the Securities, the 2004 Indenture and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Securities, will not, (a) violate the Restated Certificate of Incorporation or the Amended and Restated By-laws of the Company or (b) result in a default under or breach of the agreements filed as exhibits nos. • through •, inclusive, to the Company's Annual Report on Form 10-K for the fiscal year ended •, 20.. **[**and exhibits nos. • through •, inclusive, to the Company's Quarterly Report on Form 10-Q for the quarterly period ended •, 20..**][**and exhibit[s] no[s]. • to the Company's Current Report on Form 8-K filed •, 20..**]**.

(7) The Underwriting Agreement has been duly authorized, executed and delivered by the Company.

(8) The 2004 Indenture has been duly authorized, executed and delivered by the Company and duly qualified under the Trust Indenture Act of 1939; the Securities have been duly authorized, executed, authenticated, issued and delivered; and the 2004 Indenture and the Securities constitute valid and legally binding obligations of the Company enforceable in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles.

(9) The Company is not, and immediately after giving effect to the offering and sale of the Securities will not be, an "investment company" as such term is defined in the Investment Company Act of 1940.

[Use the following if the Securities are denominated in a non-U.S. dollar currency — We note that, as of the date of this opinion, a judgment for money in an action based on Securities denominated in foreign currencies or currency units in a Federal or state court in the United States ordinarily would be enforced in the United States only in U.S. dollars. The date used to determine the rate of conversion of the foreign currency or currency unit in which a particular Security is denominated into U.S. dollars will depend upon various factors, including which court renders the judgment. In the case of a Security denominated in a foreign currency, a state court in the State of New York rendering a judgment on such Security would be required under Section 27 of the New York Judiciary Law to render such judgment in the foreign currency in which the Security is denominated, and such judgment would be converted into U.S. dollars at the exchange rate prevailing on the date of entry of the judgment.**]**

We are expressing no opinion in paragraphs (4) and (5) above, insofar as the issuance of the Securities in accordance with the 2004 Indenture and the sale of the Securities by the Company to the Underwriters pursuant to the Underwriting Agreement, and the performance by the Company of its obligations under the Securities, the 2004 Indenture and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, are concerned, as to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights. Also, for purposes of the opinion in paragraphs (3) and (5) above, "Other Covered Laws" means the Federal laws of the United States, the laws of the State of New York and the Delaware General Corporation Law (including, in each case, the published rules and regulations thereunder) that in our experience normally are applicable to general business corporations and transactions such as those contemplated by the Underwriting Agreement; provided, however, that such term does not include antifraud laws and fraudulent transfer laws, tax laws, the Employee Retirement Income Security Act of 1974, antitrust laws or any law that is applicable to the Company, the Underwriting Agreement, the Securities, the 2004 Indenture or the transactions contemplated thereby solely as part of a regulatory regime applicable to the Company or its affiliates due to its or their status, business or assets (including any such regime applicable to banks, bank holding companies or broker-dealers), or, solely for purposes of the opinion in paragraph (5) above, any Federal or state securities laws.

Finally, with respect to paragraphs (2) and (4) above, we note that the Company and each of its transactions, including those contemplated in the Underwriting Agreement, the Securities and the 2004 Indenture, are also subject to (i) general provisions of the Banking Laws prohibiting the Company from engaging in unsafe and unsound practices, (ii) the U.S. Federal Reserve Act, relating to transactions between the Company and its affiliates, and (iii) other requirements of a prudential nature that are set forth in the Banking Laws, as to all of which we express no opinion.

The foregoing opinion is limited to the Federal laws of the United States, the laws of the State of New York and the General Corporation Law of the State of Delaware, and we are expressing no opinion as to the effect of the laws of any other jurisdiction.

We have relied as to certain matters upon information obtained from public officials, officers of the Company and other sources believed by us to be responsible, and we have assumed that the 2004 Indenture has been duly authorized, executed and delivered by the Trustee, that the Securities conform to the form thereof examined by us, that the Trustee's certificates of authentication of the Securities have been manually signed by one of the Trustee's authorized officers and that the signatures on all documents examined by us are genuine, assumptions which we have not independently verified.

This opinion is furnished by us, as counsel to the Underwriters, to you, as Representative of the Underwriters, solely for the benefit of the Underwriters in their capacity as such, and may not be relied upon by any other person. This opinion may not be quoted, referred to or furnished to any purchaser or prospective purchaser of the Securities and may not be used in furtherance of any offer or sale of the Securities.

Very truly yours,

Form of Letter of Counsel to the Underwriters

[date**]**

Goldman Sachs & Co. LLC,
As Representative of the
Several Underwriters,
c/o Goldman Sachs & Co. LLC,
200 West Street,
New York, New York 10282.

Ladies and Gentlemen:

This is with reference to the registration under the Securities Act of 1933 (the "Securities Act") and offering of $..... aggregate principal amount of **[...%]** Subordinated Notes due 20**[**.....**]** (the "Securities") of The Goldman Sachs Group, Inc. (the "Company"). The Registration Statement relating to the Securities (File No. 333-[**]**) was filed on **[ ]** on Form S-3ASR in accordance with procedures of the Securities and Exchange Commission (the "Commission") permitting an immediate, delayed or continuous offering of securities pursuant thereto and, if appropriate, a post-effective amendment or prospectus supplement that provides information relating to the terms of the securities and the manner of their distribution.

The Securities have been offered by the Prospectus dated **[ ]**(the "Base Prospectus"), as supplemented by the Prospectus Supplement dated **[ ]** (the "Prospectus Supplement"), which updates or supplements certain information contained in the Base Prospectus. The Base Prospectus, as so supplemented by the Prospectus Supplement, does not necessarily contain a current description of the Company's business and affairs since, pursuant to Form S-3, it incorporates by reference certain documents filed with the Commission that contain information as of various dates.

In accordance with our understanding with you as to the scope of our services under the circumstances applicable to the offering of the Securities, we reviewed the Registration Statement, the Base Prospectus and the Prospectus Supplement")**[** and the documents listed in Schedule A hereto (those documents, taken together with the Base Prospectus, the "Pricing Disclosure Package")**]**, participated in discussions with your representatives and those of the Company, its counsel and its accountants and advised your representatives as to the requirements of the Securities Act and the applicable rules and regulations thereunder. Between the date of the Prospectus Supplement and the time of delivery of this letter, we participated in further discussions with your representatives and those of the Company, its counsel and its accountants concerning certain matters relating to the Company and reviewed certificates of certain officers of the Company, an opinion of **[**a**][**an Associate**]** General Counsel of the Company and a letter from the Company's independent accountants delivered to you in connection with the offering of the Securities.

On the basis of the information that we gained in the course of the performance of the services referred to above, considered in the light of our understanding of the applicable law (including the requirements of Form S-3 and the character of the prospectus contemplated thereby) and the experience we have gained through our practice under the Securities Act, we advised you and now confirm that, in our opinion, each part of the Registration Statement, when such part became effective, and the Base Prospectus, as supplemented by the Prospectus Supplement, as of the date of the Prospectus Supplement, appeared on their face to be appropriately responsive, in all material respects relevant to the offering of the Securities, to the requirements of the Securities Act, the Trust Indenture Act of 1939 and the applicable rules and regulations of the Commission thereunder. Further, nothing that came to our attention in the course of such review has caused us to believe that, insofar as relevant to the offering of the Securities,

(a) any part of the Registration Statement, when such part became effective, contained any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein not misleading,

(b) **[**the Base Prospectus, as supplemented by the Preliminary Prospectus Supplement dated **[ ]** (the "Preliminary Prospectus Supplement") as of **[**__:00**] [**A/P**]**.M on **[ ]** when considered together with the statements made under the caption "Specific Terms of the Subordinated Notes – Terms of the Subordinated Notes" in the Prospectus Supplement,**][**the Pricing Disclosure Package, as of **[**__:00**] [**A/P**].**M. on …….. , ……. (which you have informed us is a time prior to the time of the first sale of the Securities by any Underwriter), when considered together with the statements made under the caption **[**"Specific Terms of the Notes"**]** in, and the information **[**in the table**]** on the front cover of, the Prospectus Supplement,**]** contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading or

(c) the Base Prospectus, as supplemented by the Prospectus Supplement, as of the date of the Prospectus Supplement, contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

We also advise you that nothing that came to our attention in the course of the procedures described in the second sentence of the prior paragraph has caused us to believe that, insofar as relevant to the offering of the Securities, the Base Prospectus, as supplemented by the Prospectus Supplement, as of the time of delivery of this letter, contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

In addition, we do not know of any litigation or any governmental proceeding instituted or threatened against the Company that was required to be disclosed in the **[**Company's Annual Report on Form 10-K for the fiscal year ended •, 20..**][**the Company's Quarterly Report on Form 10-Q for the quarterly period ended •, 20..**]** when such Report was filed and was not so disclosed. We call to your attention, however, the fact that the Company has an internal legal department and that, while we represent the Company on a regular basis, our engagement has been limited to specific matters as to which we were consulted by the Company and, accordingly, our knowledge with respect to litigation and governmental proceedings instituted or threatened against the Company is similarly limited. Also, insofar as the offering of the Securities is concerned, we do not know of any documents that were required to be filed as exhibits to the **[**Company's Annual Report on Form 10-K for the fiscal year ended •, 20..**][**the Company's Quarterly Report on Form 10-Q for the quarterly period ended •, 20..**]** when such Report was filed and were not so filed.

The limitations inherent in the independent verification of factual matters and the character of determinations involved in the registration process are such, however, that we do not assume any responsibility for the accuracy, completeness or fairness of the statements contained in the Registration Statement, the Base Prospectus or the Prospectus Supplement **[**or the Pricing Disclosure Package**]**, except for those made under the captions **[**"Description of Debt Securities We May Offer", "Legal Ownership and Book-Entry Issuance" and "Plan of Distribution"**]** in the Base Prospectus and **[**"Specific Terms of the Subordinated Notes", "Additional Information About the Subordinated Notes" and "Underwriting"**]** in the Prospectus Supplement, in each case insofar as they relate to provisions, therein described, of the Securities, the 2004 Indenture under which the Securities are being issued and the Underwriting Agreement relating to the Securities, and except for those made under the caption "United States Taxation" in the Base Prospectus as supplemented by "Specific Terms of the Subordinated Notes – United States Federal Income Tax Consequences" in the Prospectus Supplement, insofar as they relate to provisions, therein described, of U.S. Federal income tax law applicable to the Securities. Also, we do not express any opinion or belief as to the financial statements or other financial data derived from accounting records contained in the Registration Statement, the Base Prospectus**[**,**]** **[**or**]** the Prospectus Supplement **[**or the Pricing Disclosure Package**]**, as to the report of management's assessment of the effectiveness of internal control over financial reporting or the auditor's report on the effectiveness of such internal control, each as included in the Registration Statement, the Base Prospectus**[**,**]** **[**or**]** the Prospectus Supplement **[**or the Pricing Disclosure Package**]**, or as to the statement of the eligibility and qualification of the Trustee under the 2004 Indenture under which the Securities are being issued.

This letter is furnished by us, as counsel to the Underwriters, to you, as Representative of the Underwriters, solely for the benefit of the Underwriters in their capacity as such, and may not be relied upon by any other person. This letter may not be quoted, referred to or furnished to any purchaser or prospective purchaser of the Securities and may not be used in furtherance of any offer or sale of the Securities.

Very truly yours,

Schedule A

[*List documents other than the Base Prospectus that are included in the Pricing Disclosure Package. Include any Preliminary Prospectus Supplement if prepared by the Company pursuant to the terms of the Underwriting Agreement.***]**

ANNEX II

Form of Opinion of General Counsel or Associate General Counsel

(1) The Company has been duly incorporated and is validly existing as a corporation under the laws of the State of Delaware;

(2) The Underwriting Agreement has been duly authorized, executed and delivered by the Company;

(3) The Securities have been duly authorized, executed, issued and delivered; and

(4) The 2004 Indenture has been duly authorized, executed and delivered by the Company.

In rendering such opinion, such counsel may state that such counsel expresses no opinion as to the laws of any jurisdiction other than the Federal laws of the United States, the laws of the State of New York and the General Corporation Law of the State of Delaware; that, insofar as such opinion involves factual matters, such counsel has relied upon certificates of officers of the Company and its subsidiaries and certificates of public officials and other sources believed by such counsel to be responsible; and that such counsel has assumed that the 2004 Indenture has been duly authorized, executed and delivered by the Trustee, that the Securities conform to the forms thereof examined by such counsel (or members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision), that the Trustee's certificates of authentication of the Securities have been manually signed by one of the Trustee's authorized signatories and that the signatures on all documents examined by such counsel (or members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision) are genuine, assumptions that such counsel has not independently verified. In addition, such counsel may state that such counsel has examined, or has caused members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision to examine, such corporate and partnership records, certificates and other documents, and such questions of law, as such counsel has considered necessary or appropriate for the purposes of such opinion.

ANNEX III

Pursuant to Section 9(d) of the Underwriting Agreement, the accountants shall furnish letters to the Underwriters to the effect that:

(i) They are an independent registered public accounting firm with respect to the Company within the meaning of the Act and the applicable published rules and regulations thereunder adopted by the Securities and Exchange Commission (the "SEC") and the Public Company Accounting Oversight Board (United States) (the "PCAOB");

(ii) In their opinion, the financial statements and any supplementary financial information and schedules (and, if applicable, financial forecasts and/or pro forma financial information) audited or examined by them and included or incorporated by reference in the Registration Statement or the Prospectus comply as to form in all material respects with the applicable accounting requirements of the Act or the Exchange Act, as applicable, and the related published rules and regulations thereunder; and, if applicable, they have made a review in accordance with standards established by the PCAOB of the consolidated interim financial statements, selected financial data, pro forma financial information, financial forecasts and/or condensed financial statements derived from audited financial statements of the Company for the periods specified in such letter, as indicated in their reports thereon, copies of which have been furnished to the Underwriters;

(iii) They have made a review in accordance with standards established by the PCAOB of the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included in the Company's Quarterly Report(s) on Form 10-Q covering periods after the latest full fiscal year and incorporated by reference into the Prospectus as indicated in their reports thereon copies of which have been furnished to the Underwriters; and on the basis of specified procedures including inquiries of officials of the Company, who have responsibility for financial and accounting matters regarding whether the unaudited condensed consolidated financial statements referred to in paragraph (vi)(A)(i) below comply as to form in all material respects with the applicable accounting requirements of the Act and the Exchange Act and the related published rules and regulations, nothing came to their attention that caused them to believe that the unaudited condensed consolidated financial statements do not comply as to form in all material respects with the applicable accounting requirements of the Act and the Exchange Act and the related published rules and regulations;

(iv) The unaudited selected financial information with respect to the consolidated results of operations and financial position of the Company for the five most recent fiscal years included in the Prospectus and/or included or incorporated by reference in Item 6 of the Company's Annual Report on Form 10-K for the most recent fiscal year agrees with the corresponding amounts (after restatement where applicable) in the audited consolidated financial statements for such five fiscal years which were included or incorporated by reference in the Company's Annual Reports on Form 10-K for such fiscal years;

(v) They have compared the information in the Prospectus under selected captions with the disclosure requirements of Regulation S-K and on the basis of limited procedures specified in such letter nothing came to their attention as a result of the foregoing procedures that caused them to believe that this information does not conform in all material respects with the disclosure requirements of Items 301, 302 and 503(d), respectively, of Regulation S-K;

(vi) On the basis of limited procedures, not constituting an examination in accordance with generally accepted auditing standards, consisting of a reading of the unaudited financial statements and other information referred to below, a reading of the latest available interim financial statements of the Company and its subsidiaries, inspection of the minute books of the Company and its subsidiaries since the date of the latest audited financial statements included or incorporated by reference in the Prospectus, inquiries of officials of the Company and its subsidiaries responsible for financial and accounting matters and such other inquiries and procedures as may be specified in such letter, nothing came to their attention that caused them to believe that:

(A) (i) the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included or incorporated by reference in the Company's Quarterly Reports on Form 10-Q incorporated by reference in the Prospectus do not comply as to form in all material respects with the applicable accounting requirements of the Exchange Act and the related published rules and regulations, or (ii) any material modifications should be made to the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included or incorporated by reference in the Company's Quarterly Report(s) on Form 10-Q incorporated by reference in the Prospectus for them to be in conformity with generally accepted accounting principles;

(B) any other unaudited income statement data and balance sheet items included in the Prospectus do not agree with the corresponding items in the unaudited consolidated financial statements from which such data and items were derived, and any such unaudited data and items were not determined on a basis substantially consistent with the basis for the corresponding amounts in the audited consolidated financial statements included or incorporated by reference in the Company's Annual Report on Form 10-K for the most recent fiscal year;

(C) the unaudited financial statements which were not included in the Prospectus but from which were derived the unaudited condensed financial statements referred to in clause (A) and any unaudited income statement data and balance sheet items included in the Prospectus as most recently amended or supplemented and referred to in clause (B) were not determined on a basis substantially consistent with the basis for the audited financial statements included or incorporated by reference in the Company's Annual Report on Form 10-K for the most recent fiscal year;

(D) any unaudited pro forma consolidated condensed financial statements included or incorporated by reference in the Prospectus do not comply as to form in all material respects with the applicable accounting requirements of the Act and the published rules and regulations thereunder or the pro forma adjustments have not been properly applied to the historical amounts in the compilation of those statements;

(E) as of a specified date not more than five days prior to the date of such letter, there have been any decrease in shareholders' equity (other than issuances or forfeitures of restricted stock units issued under the Company's Stock Incentive Plan and repurchases of common stock in accordance with the Company's common stock repurchase program or issuances of stock associated with the Company's employee stock option plans), any increase in unsecured long-term borrowings of the Company and its subsidiaries, or any decreases in consolidated total current assets or other items specified by the Representative, or any increases in any items specified by the Representative, in each case as compared with amounts shown in the latest balance sheet included or incorporated by reference in the Prospectus, except in each case for changes, increases or decreases which the Prospectus discloses have occurred or may occur or which are described in such letter.

(vii) In addition to the audit referred to in their report(s) included or incorporated by reference in the Prospectus and the limited procedures, inspection of minute books, inquiries and other procedures referred to in paragraphs (iii) and (vi) above, they have carried out certain specified procedures, not constituting an audit in accordance with generally accepted auditing standards, with respect to certain amounts, percentages and financial information specified by the Representative which are derived from the general accounting records of the Company and its subsidiaries which appear in the Prospectus (excluding documents incorporated by reference), or in Part II of, or in exhibits and schedules to, the Registration Statement specified by the Representative or in documents incorporated by reference in the Prospectus specified by the Representative, and have compared certain of such amounts, percentages and financial information with the accounting records of the Company and its subsidiaries and have found them to be in agreement.

Exhibit 1.3

The Goldman Sachs Group, Inc.

[Title of Preferred Stock]

[FORM OF]

Underwriting Agreement

_____, 20__

Goldman Sachs & Co. LLC,
As Representative of the several Underwriters
named in Schedule I hereto,
200 West Street,
New York, New York 10282.

Ladies and Gentlemen:

The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters") the Preferred Shares that are specified in Schedule III hereto (the "[Preferred] Shares") [and are represented by depositary shares (the "Depositary Shares") deposited against delivery of Depositary Receipts (the "Depositary Receipts") evidencing the Depositary Shares that are to be issued by as depositary (the "Depositary") under the Deposit Agreement, dated , 20 , among the Company, the Depositary and the holders from time to time of the Depositary Receipts issued thereunder, as supplemented from time to time. Each Depositary Share represents beneficial ownership of a fraction of a Preferred Share, as specified in Schedule III to this Agreement]. [The Depositary Shares and the Preferred Shares represented thereby are collectively called the "Shares".] The Shares consist of (i) an aggregate of [Depositary] Shares [and the Preferred Shares represented thereby] ([collectively,] the "Firm Shares") and (ii) at the election of the Underwriters, up to an aggregate of additional [Depositary] Shares [and the additional Preferred Shares represented thereby] as provided in Section 2 hereof ([collectively,] the "Optional Shares").

The Company acknowledges and agrees that Goldman Sachs & Co. LLC ("GS&Co.") may use the Prospectus (as defined below) in connection with offers and sales of the Shares as contemplated in the Prospectus under the caption "Plan of Distribution — Market-Making Resales by Affiliates" ("Secondary Market Transactions").

The Company further acknowledges and agrees that GS&Co. is under no obligation to effect any Secondary Market Transactions and, if it does so, it may discontinue effecting such transactions at any time without providing any notice to the Company. The term "Underwriter", whenever used in this Agreement, shall include GS&Co., whether acting in its capacity as an Underwriter or acting in connection with a Secondary Market Transaction, except as may be specifically provided otherwise herein.

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) An "automatic shelf registration statement" as defined under Rule 405 under the Securities Act of 1933, as amended (the "Act"), on Form S-3 (File No. 333-) in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission") not earlier than three years prior to the date hereof; such registration statement, and any post-effective amendment thereto, became effective on filing; and no stop order suspending the effectiveness of such registration statement or any part thereof has been issued and no proceeding for that purpose has been initiated or threatened by the Commission, and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act has been received by the Company (the base prospectus filed as part of such registration statement, in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the "Base Prospectus"; any preliminary prospectus (including any preliminary prospectus supplement) relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of such registration statement, including all exhibits thereto but excluding Form T-1 and including any prospectus supplement relating to the Shares that is filed with the Commission and deemed by virtue of Rule 430B to be part of such registration statement, each as amended at the time such part of the registration statement became effective, are hereinafter collectively called the "Registration Statement"; the Base Prospectus, as amended and supplemented immediately prior to the Applicable Time (as defined in Section 1(c) hereof), is hereinafter called the "Pricing Prospectus"; the form of the final prospectus relating to the Shares filed with the Commission pursuant to Rule 424 (b) under the Act in accordance with Section 5(a) hereof is hereinafter called the "Prospectus"; any reference herein to the Base Prospectus, the Pricing Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Act, as of the date of such prospectus; any reference to any amendment or supplement to the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any post-effective amendment to the Registration Statement, any prospectus supplement relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act and any documents filed under the

Securities Exchange Act of 1934, as amended (the "Exchange Act"), and incorporated therein, in each case after the date of the Base Prospectus, such Preliminary Prospectus or the Prospectus, as the case may be; and any reference to any amendment to the Registration Statement shall be deemed to refer to and include any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act after the effective date of the Registration Statement that is incorporated by reference in the Registration Statement);

(b) No order preventing or suspending the use of any Preliminary Prospectus or any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Shares (an "Issuer Free Writing Prospectus") has been issued by the Commission, and each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein;

(c) For the purposes of this Agreement, the "Applicable Time" is : **[**a**][**p**]**.m. (Eastern time) on the date of this Agreement; the Pricing Prospectus together with the statements under the caption "Description of **[**Title of Preferred Stock**]**" **[**and "Description of Depositary Shares"**]** in, and the information in the **[**table on the**]** front cover of, the Prospectus, taken together with such other information, if any, set forth in Schedule II(b) hereto (collectively, the "Pricing Disclosure Package") as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus listed on Schedule II(a) hereto (if any) does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus and each such Issuer Free Writing Prospectus, as supplemented by and taken together with the Pricing Disclosure Package as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in an Issuer Free Writing Prospectus in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein;

(d) The documents incorporated by reference in the Pricing Prospectus and the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; any further documents so filed and incorporated by reference in the Prospectus or any further amendment or supplement thereto, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder and will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein; and no such documents were filed with the Commission since the Commission's close of business on the business day immediately prior to the date of this Agreement and prior to the execution of this Agreement, except as set forth on Schedule II(b) hereto;

(e) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement and as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein;

(f) Neither the Company nor any of its subsidiaries that are listed in the Company's latest annual report on Form 10-K pursuant to the requirements of Form 10-K and Item 601(b)(21) of the Commission's Regulation S-K and are "significant subsidiaries" as defined in Rule 1-02(w) of the Commission's Regulation S-X (the "Significant Subsidiaries") has sustained since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration

Statement and the Pricing Prospectus, there has not been any material adverse change in the capital stock or long-term debt of the Company or any of its Significant Subsidiaries or any material adverse change, or any development involving a prospective material adverse change, in or affecting the general affairs, management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries, otherwise than as set forth or contemplated in the Pricing Prospectus;

(g) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with power and authority (corporate and other) to own its properties and conduct its business as described in the Pricing Prospectus;

(h) The Company has an authorized capitalization as set forth in the Pricing Prospectus, and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable;

(i) The **[**Preferred**]** Shares **[**and the Depositary Shares**]** have been duly and validly authorized, and, when the Firm Shares are issued and delivered pursuant to this Agreement and, in the case of any Optional Shares, pursuant to Additional Shares Options (as defined in Section 3 hereof) with respect to such Shares, such Shares will be duly and validly issued and fully paid and non-assessable; the Shares conform to the description thereof contained in the Pricing Prospectus and will conform to the description thereof contained in the Prospectus;

(j) The issue and sale of the Shares, the compliance by the Company with all of the provisions of the Shares, this Agreement and each Additional Shares Option (as defined in Section 3 hereof)**[**, the Deposit Agreement**]** and the consummation of the transactions herein and therein contemplated will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, nor will such action result in any violation of the provisions of the Restated Certificate of Incorporation or the Amended and Restated By-laws of the Company or any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares by the Company or the consummation by the Company of the transactions contemplated by this Agreement except such as have been obtained under the Act and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(k) Neither the Company nor any of its Significant Subsidiaries is in violation of its organizational documents or in default in the performance or observance of any material obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound;

(l) The statements set forth in the Pricing Prospectus and the Prospectus under the captions "Description of **[**Title of Preferred Stock**]**", **[**"Description of Depositary Shares",**]** "Description of Preferred Stock We May Offer", **[**"Description of Preferred Stock We May Offer — Fractional or Multiple Shares of Preferred Stock Issued as Depositary Shares"**]** and "Legal Ownership and Book-Entry Issuance", insofar as they purport to constitute a summary of the terms of the **[**Preferred**]** Shares **[**and the Depositary Shares, respectively**]**, and under the captions "United States Taxation" and "Plan of Distribution", insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair;

(m) Other than as set forth in the Pricing Prospectus, there are no legal or governmental proceedings pending to which the Company or any of its subsidiaries is a party or of which any property of the Company or any of its subsidiaries is the subject which, if determined adversely to the Company or any of its subsidiaries, would individually or in the aggregate have a material adverse effect on the current or future consolidated financial position, stockholders' equity or results of operations of the Company and its subsidiaries; and, to the best of the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or threatened by others;

(n) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof, will not be an "investment company", as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(o) (A) (i) At the time of filing the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), and (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Act) made any offer relating to the Shares in reliance on the exemption of Rule 163 under the Act, the Company was a "well-known seasoned issuer" as defined in Rule 405 under the Act; and (B) at the earliest

time after the filing of the Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, the Company was not an "ineligible issuer" as defined in Rule 405 under the Act;

(p) The Company and its Significant Subsidiaries possess all authorizations issued by the appropriate Federal, state and foreign governments, governmental or regulatory authorities, self-regulatory organizations and all courts or other tribunals, and are members in good standing of each Federal, state or foreign exchange, board of trade, clearing house or association and self-regulatory or similar organization necessary to conduct their respective businesses as described in the Pricing Prospectus, except as would not, individually or in the aggregate, have a material adverse effect on the prospects, financial position, stockholders' equity or results of operations of the Company and its subsidiaries;

(q) PricewaterhouseCoopers LLP, who certified certain financial statements of the Company and its subsidiaries, and audited the Company's internal control over financial reporting, is an independent registered public accounting firm as required by the Act and the rules and regulations of the Commission thereunder;

(r) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies with the requirements of the Exchange Act and has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Except as disclosed in the Pricing Prospectus, the Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting;

(s) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(t) Since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus, there has been no change in the Company's internal control over financial reporting that has materially adversely affected, or is reasonably likely to materially adversely affect, the Company's internal control over financial reporting;

(u) The Company has implemented an anti-bribery program including policies and procedures reasonably designed to ensure compliance with applicable law, including without limitation the Foreign Corrupt Practices Act of 1977 and the Bribery Act 2010 of the United Kingdom, and will maintain such program, as modified from time to time, during the term of this Agreement. The Company will not use the proceeds of the offering of the Shares hereunder in a manner that will violate applicable anti-bribery laws;

(v) The Company has developed and implemented written policies, procedures and internal controls reasonably designed to ensure compliance with applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT Act of 2001, and the regulations promulgated thereunder, and the anti-money laundering laws of the various jurisdictions in which the Company and its regulated subsidiaries conduct business; and

(w) The Company has developed and implemented written policies, procedures and internal controls reasonably designed to ensure compliance with any economic sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury, or other relevant economic sanctions authority (collectively, "Sanctions"), and the Company will not use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions (except as may be authorized by the relevant economic sanctions authority) or (ii) in any other manner that will result in a violation of Sanctions by the Company.

2. Subject to the terms and conditions set forth herein, (a) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price to the Underwriters set forth in Schedule III hereto, the number of Firm Shares set forth opposite the name of such Underwriter in Schedule I hereto and, (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares, as provided below, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price to the Underwriters set forth in Schedule III hereto, and to sell at the same price as the Firm Shares, such Underwriter's pro rata share (based on the respective maximum number of Optional Shares set forth next to the Underwriters' names in Schedule I hereto) of that portion of the total number of Optional Shares as to which such election shall have been exercised on behalf of all the Underwriters.

3. Upon the authorization by you of the release of the Firm Shares, the several Underwriters propose to offer the Firm Shares for sale upon the terms and conditions set forth in the Prospectus.

The Company hereby grants to each of the Underwriters the right (an "Additional Shares Option", which shall be deemed to be part of this Agreement for all purposes) to purchase at their election up to the number of Optional Shares set forth opposite the name of such Underwriter in Schedule I hereto on the terms referred to in the paragraph above. Any such election to purchase Optional Shares may be exercised only by written notice from the Representative to the Company given within a period of 30 calendar days after the date of this Agreement, setting forth the aggregate number of Optional Shares to be purchased by all Underwriters and the date on which such Optional Shares are to be delivered, as determined by the Representative, but in no event earlier than the First Time of Delivery (as defined in Section 4) or, unless the Representative and the Company otherwise agree in writing, no earlier than two or later than ten business days after the date of such notice.

4. (a) Certificates for the **[**Depositary**]** Shares comprising the Firm Shares and any Optional Shares to be purchased by each Underwriter hereunder, in the form specified in Schedule III to this Agreement, in such authorized denominations and registered in such names as the Representative may request upon at least 48 hours' prior notice to the Company, shall be delivered by or on behalf of the Company to the Representative, through the facilities of the Depository Trust Company ("DTC"), for the account of such Underwriter, against payment by such Underwriter or on its behalf of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to GS&Co. at least forty-eight hours in advance, (i) with respect to the Firm Shares, all in the manner and at the place and time and date specified in Schedule III to this Agreement or at such other place and time and date as the Representative and the Company may agree upon in writing, such time and date being herein called the "First Time of Delivery" and (ii) with respect to the Optional Shares, if any, in the manner and at the time and date specified by the Representative in the written notice given by the Representative of the Underwriters' election to purchase such Optional Shares, or at such other time and date as the Representative and the Company may agree upon in writing, such time and date, if not the First Time of Delivery, herein called the "Second Time of Delivery". Each such time and date for delivery is herein called a "Time of Delivery".

(b) The documents to be delivered at any Time of Delivery by or on behalf of the parties hereto pursuant to Section 9 hereof, including the cross-receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 9(j) hereof, will be delivered at the offices of Sullivan & Cromwell LLP, 125 Broad St., New York, New York 10004 (the "Closing Location"), and the Shares will be delivered to DTC and the Depositary, or their respective designated custodians, all at such Time of Delivery. A meeting will be held at the Closing Location at ___:___ **[**a**][**p**]**.m., New York City time, on the New York Business Day next preceding any Time of

Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file the Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the date of this Agreement; to make no further amendment or any supplement to the Registration Statement, the Base Prospectus or the Prospectus prior to any Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; if requested by you prior to the Applicable Time, to prepare a final term sheet, containing solely a description of the Shares, in substantially the form set forth in Schedule III hereto and to file such term sheet pursuant to Rule 433(d) under the Act within the time required by such Rule; to file promptly all other material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required in connection with the offering or sale of the Shares (including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period (as defined in Section 6(a) hereof)), and during such same period to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any supplement to the Prospectus or any amended Prospectus has been filed with the Commission, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Shares, of any notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any such stop order or of any such order preventing or suspending the use of any Preliminary Prospectus or

other prospectus in respect of the Shares or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order; and in the event of any such issuance of a notice of objection, promptly to take such steps including, without limitation, amending the Registration Statement or filing a new registration statement, at its own expense, as may be necessary to permit offers and sales of the Shares by the Underwriters (references herein to the Registration Statement shall include any such amendment or new registration statement);

(b) If required by Rule 430B(h) under the Act, to prepare a form of prospectus in a form approved by you and to file such form of prospectus pursuant to Rule 424(b) under the Act not later than may be required by Rule 424(b) under the Act; and to make no further amendment or supplement to such form of prospectus which shall be disapproved by you promptly after reasonable notice thereof;

(c) If by the third anniversary (the "Renewal Deadline") of the initial effective date of the Registration Statement, any of the Shares remain unsold by the Underwriters, the Company will file, if it has not already done so and is eligible to do so, a new automatic shelf registration statement relating to the Shares, in a form satisfactory to you. If at the Renewal Deadline the Company is no longer eligible to file an automatic shelf registration statement, the Company will, if it has not already done so, file a new shelf registration statement relating to the Shares, in a form satisfactory to you and will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the public offering and sale of the Shares to continue as contemplated in the expired registration statement relating to the Shares. References herein to the Registration Statement shall include such new automatic shelf registration statement or such new shelf registration statement, as the case may be;

(d) Promptly from time to time to take such action as you may reasonably request to qualify the Shares for offering and sale under the securities laws of such jurisdictions as you may request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Shares (including, in the case of GS&Co., in any Secondary Market Transactions during the Secondary Transactions Period), provided that in connection therewith the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction;

(e) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request,

and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Shares (or, in the case of GS&Co., in connection with any Secondary Market Transactions during the Secondary Transactions Period, whether before or after such expiration) and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Act or the Exchange Act, to notify you and upon your request to file such document and to prepare and furnish without charge to each Underwriter and to any dealer in securities as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act (it being understood, however, that the preceding clause, rather than this clause, shall apply with respect to GS&Co. in connection with any Secondary Market Transactions during the Secondary Transactions Period); provided, however, that the Company may elect, upon notice to GS&Co., not to comply with this paragraph (e) with respect to any Secondary Market Transaction, but only for a period or periods that the Company reasonably determines are necessary in order to avoid premature disclosure of material, non-public information, unless, notwithstanding such election, such disclosure would otherwise be required under this Agreement; and provided, further, that no such period or periods described in the preceding proviso shall exceed 90 days in the aggregate during any period of 12 consecutive calendar months. Upon receipt of any such notice, GS&Co. shall cease using the Prospectus or any amendment or supplement thereto in connection with Secondary Market Transactions until it receives notice from the Company that it may resume using such document (or such document as it may be amended or supplemented);

(f) To make generally available to its securityholders as soon as practicable, but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(g) During the period beginning from the date hereof and continuing to and including the later of (i) the termination of trading restrictions for the Shares as notified to the Company by you and (ii) the last Time of Delivery for the Shares, not to (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, except as provided hereunder, any securities of the Company that are substantially similar to the Shares, including but not limited to any securities that are convertible into or exchangeable for, or that represent the right to receive, **[**Preferred Shares or**]** Shares or any such substantially similar securities (other than pursuant to employee stock option plans existing on, or upon the conversion of convertible or exchangeable securities outstanding as of, the date hereof) without your prior written consent;

(h) To use its best efforts to list, subject to notice of issuance, **[**the Depositary Shares comprising**]** the Shares on the New York Stock Exchange (the "NYSE");

(i) To pay the required Commission filing fees relating to the Shares within the time required by Rule 456(b)(1) under the Act without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) under the Act; and

(j) To use the net proceeds received by it from the sale of the Shares pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption "Use of Proceeds".

6. The Company agrees with GS&Co., with respect to each issuance of the Shares:

(a) To make no amendment or supplement to the Registration Statement, the Base Prospectus or the Prospectus during the Secondary Transactions Period which shall be disapproved by GS&Co. promptly after reasonable notice thereof. The "Secondary Transactions Period" means the period beginning on the date hereof and continuing for as long as may be required under applicable law, in the reasonable judgment of GS&Co. after consultation with the Company, in order to offer and sell any such Shares in Secondary Market Transactions as contemplated by the Pricing Prospectus;

(b) During the Secondary Transactions Period, to furnish to GS&Co. copies of all reports or other communications (financial or other) furnished to stockholders generally, and to deliver to GS&Co. (i) as soon as they are available, copies of any reports and financial statements furnished to or filed with

the Commission or any national securities exchange on which the Shares or any class of securities of the Company is listed; and (ii) such additional information concerning the business and financial condition of the Company as GS&Co. may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company and its subsidiaries are consolidated in reports furnished to its stockholders generally or to the Commission); and

(c) Each time the Registration Statement, the Base Prospectus or the Prospectus shall be amended or supplemented during the Secondary Transactions Period, to furnish or cause to be furnished to GS&Co., upon its request, written opinions of counsel for the Company, a letter from the independent accountants who have certified the financial statements included in the Registration Statement as then amended and certificates of officers of the Company, in each case in form and substance reasonably satisfactory to GS&Co., all to the effect specified in subsections (c), (d) and (j), respectively, of Section 9 hereof (as modified to relate to the Registration Statement and the Prospectus as then amended or supplemented).

Notwithstanding the foregoing provisions, the Company may elect, upon notice to GS&Co., not to comply with this Section 6 with respect to any Secondary Market Transaction, but only for a period or periods that the Company reasonably determines are necessary in order to avoid premature disclosure of material, non-public information, unless, notwithstanding such election, such disclosure would otherwise be required under this Agreement; and provided, further, that no such period or periods described in the preceding proviso shall exceed 90 days in the aggregate during any period of 12 consecutive calendar months. Upon receipt of any such notice, GS&Co. shall cease using the Prospectus, or any amendment or supplement thereto in connection with Secondary Market Transactions until it receives notice from the Company that it may resume using such document (or such document as it may be amended or supplemented).

7. (a)(i) The Company and each Underwriter agree that the Underwriters may prepare and use one or more preliminary or final term sheets relating to the Shares containing customary information;

(ii) Each Underwriter represents that, other than as permitted under subparagraph (a)(i) above, it has not made and will not make any offer relating to the Shares that would constitute a “free writing prospectus” as defined in Rule 405 under the Act without the prior consent of the Company and GS&Co. and that Schedule II(a) hereto is a complete list of any free writing prospectus for which the Underwriters have received such consent; and

(iii) The Company represents and agrees that it has not made and will not make any offer relating to the Shares that would constitute an Issuer Free Writing Prospectus without the prior consent of GS&Co. and that Schedule II(a) hereto is a complete list of any Issuer Free Writing Prospectuses for which the Company has received such consent;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus any event occurred or occurs as a result of which such Issuer Free Writing Prospectus would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to GS&Co. and, if requested by GS&Co., will prepare and furnish without charge to each Underwriter (or, in the case of any Secondary Market Transaction, to GS&Co.) an Issuer Free Writing Prospectus or other document which will correct such conflict, statement or omission; provided, however, that this representation and warranty shall not apply to any statements or omissions in an Issuer Free Writing Prospectus made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through GS&Co. expressly for use therein; and

(d) Each Underwriter shall ensure that payments in respect of the Shares for the benefit of a holder of Shares are not subject to withholding under Sections 1471 through 1474 of the U.S. Internal Revenue Code of 1986 (or any regulations or guidance thereunder or any agreements entered into in respect thereof) as a result of such Underwriter (or any affiliated party through which the holder holds Shares) being subject to such withholding on the payment.

8. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Shares under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, the Base Prospectus, any Preliminary Prospectus, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, the Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws as provided in Section 5(d) hereof, including the fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky

survey; (iv) any fees charged by securities rating services for rating the Shares; (v) any filing fees incident to, and the fees and disbursements of counsel for the Underwriters in connection with, any required review by the Financial Industry Regulatory Authority, Inc. of the terms of the sale of the Shares; (vi) the cost of preparing the Shares; (vii) any fees and expenses in connection with the listing of the Shares; (viii) the costs and charges of any transfer agent or registrar or dividend distributing agent; and (ix) all other costs and expenses incident to the performance of its obligations hereunder and under any Additional Shares Option which are not otherwise specifically provided for in this Section. It is understood, however, that, except as provided in this Section, and Sections 10 and 14 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, transfer taxes on resale of any of the Shares by them, the cost of preparing and distributing any term sheet prepared by any Underwriter, and any advertising expenses connected with any offers they may make.

9. The obligations of the Underwriters hereunder, as to the Shares to be purchased at each Time of Delivery, shall be subject, in your discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of such Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; any final term sheet contemplated by Section 5(a) hereof, and any other material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time periods prescribed for such filings by Rule 433; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission and no notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act shall have been received; no stop order suspending or preventing the use of the Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Counsel for the Underwriters shall have furnished to you a written opinion and letter, dated such Time of Delivery, to the effect set forth in Annex I hereto;

(c) A General Counsel or Associate General Counsel for the Company shall have furnished to you his or her written opinion, dated such Time of Delivery, in form and substance satisfactory to you, to the effect set forth in Annex II hereto;

(d) On the date hereof at a time prior to the execution of this Agreement and at such Time of Delivery, the independent accountants shall have furnished to you a letter, dated the date hereof, and a letter, dated such Time of Delivery, respectively, to the effect set forth in Annex III hereto, and with respect to such letter dated such Time of Delivery, as to such other matters as you may reasonably request, and in form and substance satisfactory to GS&Co.;

(e) (i) Neither the Company nor any of its Significant Subsidiaries shall have sustained since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock or long-term debt of the Company or any of its Significant Subsidiaries or any change, or any development involving a prospective change, in or affecting the general affairs, management, financial position, stockholders' equity or results of operations of the Company and its Significant Subsidiaries, otherwise than as set forth or contemplated in the Pricing Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in the judgment of GS&Co. so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares on the terms and in the manner contemplated in the Prospectus;

(f) On or after the Applicable Time (i) no downgrading shall have occurred in the rating accorded the Company's debt securities or preferred stock by any "nationally recognized statistical rating organization", as that term is defined by the Commission for purposes of Section 3 (a)(62) of the Exchange Act, and (ii) no such organization shall have publicly announced that it has under surveillance or review, with possible negative implications, its rating of any of the Company's debt securities or preferred stock;

(g) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange; (ii) a suspension or material limitation in trading in the Company's securities on the New York Stock Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or

(v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in the judgment of GS&Co. makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Prospectus;

(h) The **[**Depositary Shares comprising the**]** Shares being delivered at each Time of Delivery shall have been duly listed, subject to notice of issuance, on the NYSE, or application thereto for such listing shall have been made;

(i) The Company shall have complied with the provisions of Section 5(e) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement; and

(j) The Company shall have furnished or caused to be furnished to you at such Time of Delivery certificates of officers of the Company satisfactory to you as to the accuracy of the representations and warranties of the Company herein at and as of such time, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such time, as to the matters set forth in subsections (a) and (e) of this Section and as to such other matters as you may reasonably request.

10. (a) The Company will indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus or any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Act, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; provided, however, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by any Underwriter through GS&Co. expressly for use therein.

(b) Each Underwriter will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, or any amendment or supplement thereto, the Pricing Prospectus or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, or any such amendment or supplement thereto, the Pricing Prospectus or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by such Underwriter through GS&Co. expressly for use therein; and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party shall not relieve it from any liability which it may have to any indemnified party otherwise than under such subsection. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 10 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law or if the indemnified party failed to give the notice required under subsection (c) above, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by

reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 10 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer affiliate of any Underwriter; and the obligations of the Underwriters under this Section 10 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company and to each person, if any, who controls the Company within the meaning of the Act.

11. (a) If any Underwriter shall default in its obligation to purchase the Shares that it has agreed to purchase hereunder at a Time of Delivery, you may in your discretion arrange for you or another party or other parties to purchase such Shares on the terms contained herein. If within thirty-six hours after such default by any Underwriter you do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to you to purchase such Shares on such terms. In the event that, within the respective prescribed periods, you notify the Company that you have so arranged for the purchase of such Shares, or the Company notifies you that it has so arranged for the purchase of such Shares, you or the Company shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus that in your opinion may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Shares.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares that remains unpurchased does not exceed one eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of Shares that such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the number of Shares that such Underwriter agreed to purchase hereunder) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares that remains unpurchased exceeds one-eleventh of the aggregate number of all Shares to be purchased at such respective Time of Delivery, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Shares of a defaulting Underwriter or Underwriters, then this Agreement (or, with respect to the Second Time of Delivery, the obligations of the Underwriters to purchase and of the Company to sell the Optional Shares) shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 8 hereof and the indemnity and contribution agreements in Section 10 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

12. The respective indemnities, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any controlling person of any Underwriter, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Shares.

13. Anything herein to the contrary notwithstanding, the indemnity agreement of the Company in subsection (a) of Section 10 hereof, the representations and warranties in subsections (b) and (c) of Section 1 hereof and any representation or warranty as to the accuracy of the Registration Statement or any Prospectus contained in any certificate furnished by the Company pursuant to Section 9 hereof, insofar as they may constitute a basis for indemnification for liabilities (other than payment by the Company of expenses incurred or paid in the successful defense of any action, suit or proceeding) arising under the Act, shall not extend to the extent of any interest therein of a controlling person or partner of an Underwriter who is a director or officer of the Company who signed the Registration Statement or a controlling person of the Company when the Registration Statement has become effective, except in each case to the extent that an interest of such character shall have been determined by a court of appropriate jurisdiction as not against public policy as expressed in the Act. Unless in the opinion of counsel for the Company the matter has been settled by controlling precedent, the Company will, if a claim for such indemnification is asserted, submit to a court of appropriate jurisdiction the question of whether such interest is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

14. If this Agreement or the Additional Shares Options shall be terminated pursuant to Section 11 hereof, the Company shall not then be under any liability to any Underwriter with respect to the Firm Shares or Optional Shares with respect to which this Agreement or the Additional Shares Options, as the case may be, shall have been terminated, except as provided in Sections 8 and 10 hereof; but, if for any other reason, any Shares are not delivered by or on behalf of the Company as provided herein, the Company will reimburse the Underwriters through you for all out-of-pocket expenses approved in writing by you, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Shares not so delivered, but the Company shall then be under no further liability to any Underwriter with respect to such Shares except as provided in Sections 8 and 10 hereof.

15. In all dealings hereunder, GS&Co. (and only GS&Co.) shall act on behalf of the Representative and each of the Underwriters (including with respect to any determination as to whether any condition to the obligations of the Underwriters has been satisfied, any representation or agreement of the Company has been complied with or any such condition, representation or agreement may be waived), and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by GS&Co.

All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to the Representative, c/o GS&Co., at 200 West Street, New York, New York 10282, Attention: Registration Department; and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: Secretary; provided, however, that any notice to an Underwriter pursuant to Section 10(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire, or telex constituting such Questionnaire, which address will be supplied to the Company by you upon request. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

In accordance with the requirements of the USA PATRIOT Act, the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

16. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 10 and 12 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Shares from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

17. Time shall be of the essence of this Agreement. As used herein, the term "business day" shall mean any day when the Commission's office in Washington, D.C. is open for business.

18. The Company acknowledges and agrees that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement and (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate. The Company agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

19. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

20. **This Agreement shall be governed by and construed in accordance with the laws of the State of New York.**

21. The Company and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

22. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such respective counterparts shall together constitute one and the same instrument.

23. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, "tax structure" is limited to any facts that may be relevant to that treatment.

24. (a) (i)In the event that any party that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such party of this Agreement and any interest and obligation in or under this Agreement will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(ii) In the event that any party that is a Covered Entity or any BHC Act Affiliate of such party becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such party are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States. The requirements of this Section 24(a) apply notwithstanding the following Section 24(b).

(b) (i) Notwithstanding anything to the contrary in this Agreement or any other agreement, but subject to the requirements of Section 24(a), no party to this Agreement shall be permitted to exercise any Default Right against a party that is a Covered Entity with respect to this Agreement that is related, directly or indirectly, to a BHC Act Affiliate of such party becoming subject to an Insolvency Proceeding, except to the extent the exercise of such Default Right would be permitted under the creditor protection provisions of 12 C.F.R. § 252.84, 12 C.F.R. § 47.5, or 12 C.F.R. § 382.4, as applicable.

(ii) After a BHC Act Affiliate of a party that is a Covered Entity has become subject to an Insolvency Proceeding, if any party to this Agreement seeks to exercise any Default Right against such Covered Entity with respect to this Agreement, the party seeking to exercise a Default Right shall have the burden of proof, by clear and convincing evidence, that the exercise of such Default Right is permitted hereunder.

(c) For purposes of this Section 24,

(i) "**BHC Act Affiliate**" of a party means an "affiliate" (as such term is defined under, and interpreted in accordance with, 12 U.S.C. 1841 (k)) of such party;

(ii) "**Covered Entity**" means any of the following: (x) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (y) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (z) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b);

(iii) "**Default Right**" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1 as applicable;

(iv) "**Insolvency Proceeding**" means a receivership, insolvency, liquidation, resolution, or similar proceeding; and

(v) "**U.S. Special Resolution Regime**" means each of (y) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (z) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

If the foregoing is in accordance with your understanding, please sign and return to us four counterparts hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

Very truly yours,

The Goldman Sachs Group, Inc.

By: _____
Name:
Title:

Accepted as of the date hereof:

_____
(Goldman Sachs & Co. LLC)

On behalf of each of the
Underwriters

SCHEDULE I

Underwriters	Number of Firm Depositary Shares to be Purchased	Maximum Number of Optional Depositary Shares to be Purchased
Goldman Sachs & Co. LLC		
[Names of the other underwriters]		
Total		

SCHEDULE II

(a) Issuer Free Writing Prospectuses:

- Final term sheet in the form set forth in Schedule III hereto, but only if the Company is obligated to prepare and file such term sheet pursuant to Section 5(a) hereof.

(b) Additional Information Incorporated by Reference:

- [None]

SCHEDULE III

The Goldman Sachs Group, Inc.

Title of Shares:

Depositary:

[Number of Depositary Shares:]

Number of [Preferred] Shares:

Initial Offering Price to Public:

Purchase Price by Underwriters:

Form of Shares:

Specified Funds for Payment of Purchase Price:

First Time of Delivery:

Dividends:

Dividend Payment Dates:

Redemption:

Liquidation Distribution:

Voting Rights:

Maturity Date:

Preemptive and Conversion Rights:

Listing:

Transfer Agent, Registrar, Depositary and Calculation Agent:

Closing Location:

Names and Addresses of Representatives:

ANNEX I

Form of Opinion of Counsel to the Underwriters

[date**]**

Goldman Sachs & Co. LLC,
As Representative of the
Several Underwriters,
c/o Goldman Sachs & Co. LLC,
200 West Street,
New York, New York 10282.

Ladies and Gentlemen:

We refer to the several purchases today by you and the other Underwriters named in Schedule I to the Underwriting Agreement, dated , 20 (the "Underwriting Agreement"), between The Goldman Sachs Group, Inc., a Delaware corporation (the "Company"), and you, as Representative of the several Underwriters named therein (the "Underwriters"), of **[**depositary shares (the "Depositary Shares"), each representing one of a share of**]** **[**Title of the Preferred Shares**]** (the "**[**Preferred**]** Shares") of the Company. **[**The Depositary Shares are being issued pursuant to a deposit agreement (the "Deposit Agreement"), dated as of , 20 , between the Company and , as depositary (the "Depositary"), **[**and the related Letter Agreement, dated as of , 20 , between the Company and the Depositary (such 20 Deposit Agreement and Letter Agreement, the ("Deposit Agreement"),**]** as supplemented from time to time.**]** **[**The Preferred Shares and the Depositary Shares representing the Preferred Shares, collectively, are herein called the "Shares". The Depositary Shares are evidenced by depositary receipts ("Depositary Receipts") issued pursuant to the Deposit Agreement.**]**

In connection with the several purchases described above, we, as counsel for the Underwriters, have examined such corporate records, certificates and other documents, and such questions of law, as we have considered necessary or appropriate for the purposes of this opinion. Upon the basis of such examination, we advise you that, in our opinion:

(1) The Company has been duly incorporated and is an existing corporation in good standing under the laws of the State of Delaware.

(2) All regulatory consents, authorizations, approvals and filings required to be obtained or made by the Company under the U.S. Bank Holding Company Act of 1956, the U.S. Federal Reserve Act and the New York State Banking Laws, including, in each case, the regulations adopted thereunder (collectively, the "Banking Laws"), for the issuance, sale and delivery of the Shares by the Company to the Underwriters have been obtained or made.

(3) All regulatory consents, authorizations, approvals and filings required to be obtained or made by the Company under the Other Covered Laws (as defined below) for the issuance, sale and delivery of the Shares by the Company to the Underwriters have been obtained or made.

(4) The issuance of the Shares in accordance with the Deposit Agreement and the sale of the Shares by the Company to the Underwriters pursuant to the Underwriting Agreement do not, and the performance by the Company of its obligations under the Shares**[**, the Deposit Agreement**]**, and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Shares, will not, violate the Banking Laws,

(5) The issuance of the Shares in accordance with the Deposit Agreement and the sale of the Shares by the Company to the Underwriters pursuant to the Underwriting Agreement do not, and the performance by the Company of its obligations under the Shares**[**, the Deposit Agreement**]** and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Shares, will not, violate the Other Covered Laws.

(6) The issuance of the Shares in accordance with **[**the Deposit Agreement and**]** the sale of the Shares by the Company to the Underwriters pursuant to the Underwriting Agreement do not, and the performance by the Company of its obligations under the Shares**[**, the Deposit Agreement**]** and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, in each case with respect to the Shares, will not, (a) violate the Restated Certificate of Incorporation or the Amended and Restated By-laws of the Company or (b) result in a default under or breach of the agreements filed as exhibits nos. • through •, inclusive, to the Company's Annual Report on Form 10-K for the fiscal year ended •, 20__ **[**and exhibits nos. • through •, inclusive, to the Company's Quarterly Report on Form 10-Q for the quarterly period ended •, 20__**]** **[**and exhibit**[**s**]** no**[**s**]**. • to the Company's Current Report on Form 8-K filed •, 20__**]**.

(7) The Underwriting Agreement has been duly authorized, executed and delivered by the Company.

(8) The **[**Preferred**]** Shares have been duly authorized and validly issued and are fully paid and nonassessable.

(9) **[**The Deposit Agreement has been duly authorized, executed and delivered by the Company and constitutes a valid and legally binding agreement of the Company enforceable in accordance with its terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles. We express no opinion, however, as to the indemnification provisions contained in Section 5.6 of the 20 Deposit Agreement **[**and paragraphs of the related Letter Agreement**]**.

(10) Upon due issuance by the Depositary of the Depositary Receipts against the deposit of the Preferred Shares in accordance with the provisions of the Deposit Agreement, the Depositary Receipts will entitle the persons in whose names the Depositary Receipts are registered to the rights specified therein and in the Deposit Agreement, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles.**]**

[(9)**][(**11)**]** The Company is not, and immediately after giving effect to the offering and sale of the Shares will not be an "investment company" as such term is defined in the Investment Company Act of 1940.

We are expressing no opinion in paragraphs (4) and (5) above, insofar as the issuance of the Shares in accordance with **[**the Deposit Agreement and**]** the sale of the Shares by the Company to the Underwriters pursuant to the Underwriting Agreement, and the performance by the Company of its obligations under the Shares**[**, the Deposit Agreement**]** and the Underwriting Agreement and the consummation by the Company of the transactions contemplated for it therein, are concerned, as to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights. Also, for purposes of the opinion in paragraphs (3) and (5) above, "Other Covered Laws" means the Federal laws of the United States, the laws of the State of New York and the Delaware General Corporation Law (including, in each case, the published rules and regulations thereunder) that in our experience normally are applicable to general business corporations and transactions such as those contemplated by the Underwriting Agreement; provided, however, that such term does not include antifraud laws and fraudulent transfer laws, tax laws, the Employee Retirement Income Security Act of 1974, antitrust laws or any law that is applicable to the Company, the Underwriting Agreement, the Shares**[**, the Deposit Agreement**]** or the transactions contemplated thereby solely as part of a regulatory regime applicable to the Company or its affiliates due to its or their status, business or assets (including any such regime applicable to banks, bank holding companies or broker-dealers), or, solely for purposes of the opinion in paragraph (5) above, any Federal or state securities laws.

Finally, with respect to paragraphs (2) and (4) above, we note that the Company and each of its transactions, including those contemplated in the Underwriting Agreement**[**,**][**and**]** the Shares **[**and the Deposit Agreement**]**, are also subject to (i) general provisions of the Banking Laws prohibiting the Company from engaging in unsafe and unsound practices, (ii) the U.S. Federal Reserve Act, relating to transactions between the Company and its affiliates, and (iii) other requirements of a prudential nature that are set forth in the Banking Laws, as to all of which we express no opinion.

The foregoing opinion is limited to the Federal laws of the United States, the laws of the State of New York and the General Corporation Law of the State of Delaware, and we are expressing no opinion as to the effect of the laws of any other jurisdiction.

We have relied as to certain matters upon information obtained from public officials, officers of the Company and other sources believed by us to be responsible, and we have assumed [that the Deposit Agreement has been duly authorized, executed and delivered by the Depositary, that the certificate evidencing Preferred Shares has been deposited with the Depositary in accordance with the Deposit Agreement,] that the certificates evidencing the [Preferred] Shares [and the Depositary Receipts] conform to the forms thereof examined by us, [that the certificates evidencing the Depositary Receipts have been duly executed and delivered by one of the Depositary's authorized officers,] that the certificate evidencing the [Preferred] Shares has been duly countersigned by a transfer agent and duly registered by a registrar of the Preferred Shares, [that the Depositary Receipts have been duly countersigned by a registrar of the Depositary Receipts] and that the signatures on all documents examined by us are genuine, assumptions which we have not independently verified.

This opinion is furnished by us, as counsel to the Underwriters, to you, as Representative of the Underwriters, solely for the benefit of the Underwriters in their capacity as such, and may not be relied upon by any other person. This opinion may not be quoted, referred to or furnished to any purchaser or prospective purchaser of the Shares and may not be used in furtherance of any offer or sale of the Shares.

Very truly yours,

Form of Letter of Counsel to the Underwriters

[date**]**

Goldman Sachs & Co. LLC,
As Representatives of the
Several Underwriters,
c/o Goldman Sachs & Co. LLC,
200 West Street
New York, New York 10282.

Ladies and Gentlemen:

This is with reference to the registration under the Securities Act of 1933 (the "Securities Act") and offering of **[**depositary shares (the "Depositary Shares"), each representing one of a share of**] [**Title of Preferred Shares**]** (the "**[**Preferred**]** Shares") of The Goldman Sachs Group, Inc. (the "Company"). **[**The Depositary Shares are being issued pursuant to a deposit agreement (the "Deposit Agreement"), dated as of , 20 , between the Company and , as depositary, as supplemented from time to time. The Preferred Shares and the Depositary Shares representing the Preferred Shares, collectively, are herein called the "Shares".**]** The Registration Statement relating to the Shares (File No. 333-) was filed on Form S-3ASR on , in accordance with procedures of the Securities and Exchange Commission (the "Commission") permitting an immediate, delayed or continuous offering of securities pursuant thereto and, if appropriate, a post-effective amendment or prospectus supplement that provides information relating to the terms of the securities and the manner of their distribution.

The Shares have been offered by the Prospectus dated , 20 (the "Base Prospectus"), as supplemented by the Prospectus Supplement dated , 20 (the "Prospectus Supplement"), which updates or supplements certain information contained in the Base Prospectus. The Base Prospectus, as so supplemented by the Prospectus Supplement, does not necessarily contain a current description of the Company's business and affairs since, pursuant to Form S-3, it incorporates by reference certain documents filed with the Commission that contain information as of various dates.

In accordance with our understanding with you as to the scope of our services under the circumstances applicable to the offering of the Shares, we reviewed the Registration Statement, the Base Prospectus, the Prospectus Supplement**[**, as well as the documents listed in Schedule A hereto (those listed documents, taken together with the Base Prospectus, the "Pricing Disclosure Package")**]**, participated in discussions with your representatives and those of the Company, its counsel and its accountants and advised your representatives as to the requirements of the Securities Act and the

applicable rules and regulations thereunder. Between the date of the Prospectus Supplement and the time of delivery of this letter, we participated in further discussions with your representatives and those of the Company, its counsel and its accountants concerning certain matters relating to the Company and reviewed certificates of certain officers of the Company, an opinion of **[**a**][**an Associate**]** General Counsel of the Company and a letter from the Company's independent accountants delivered to you in connection with the offering of the Shares.

On the basis of the information that we gained in the course of the performance of the services referred to above, considered in the light of our understanding of the applicable law (including the requirements of Form S-3 and the character of the prospectus contemplated thereby) and the experience we have gained through our practice under the Securities Act, we advised you and now confirm that, in our opinion, each part of the Registration Statement, when such part became effective, and the Base Prospectus, as supplemented by the Prospectus Supplement, as of the date of the Prospectus Supplement, appeared on their face to be appropriately responsive, in all material respects relevant to the offering of the Shares, to the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder. Further, nothing that came to our attention in the course of such review has caused us to believe that, insofar as relevant to the offering of the Shares,

(a) any part of the Registration Statement, when such part became effective, contained any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein not misleading,

(b) **[**the Base Prospectus, as of **[**__:00**]** **[**A/P**]**.M. on , , when considered together with the statements made under the caption "Description of **[**Title of Preferred Shares**]**" **[**and "Description of the Depositary Shares"**]** in the Prospectus Supplement**][**the Pricing Disclosure Package, as of : **[**A**][**P**]**.M. on , 20 (which you have informed us is a time prior to the time of the first sale of the Shares by any Underwriter), when considered together with the statements made under the caption "Description of **[**Title of Preferred Shares**]**" **[**and "Description of the Depositary Shares"**]** in, and the information **[**in the table**]** on the front cover of, the Prospectus Supplement,**]** contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading or

(c) the Base Prospectus, as supplemented by the Prospectus Supplement, as of the date of the Prospectus Supplement, contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

We also advise you that nothing that came to our attention in the course of the procedures described in the second sentence of the prior paragraph has caused us to believe that, insofar as relevant to the offering of the Shares, the Base Prospectus, as supplemented by the Prospectus Supplement, as of the time of delivery of this letter, contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

In addition, we do not know of any litigation or any governmental proceeding instituted or threatened against the Company that was required to be disclosed in the **[**Company's Annual Report on Form 10-K for the fiscal year ended •, 20__**][**the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended •, 20__**]** when such Report was filed, and was not so disclosed. We call to your attention, however, the fact that the Company has an internal legal department and that, while we represent the Company on a regular basis, our engagement has been limited to specific matters as to which we were consulted by the Company and, accordingly, our knowledge with respect to litigation and governmental proceedings instituted or threatened against the Company is similarly limited. Also, insofar as the offering of the Shares is concerned, we do not know of any documents that were required to be filed as exhibits to the **[**Company's Annual Report on Form 10-K for the fiscal year ended •, 20__**][**the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended •, 20__**]** when such Report was filed and were not so filed.

The limitations inherent in the independent verification of factual matters and the character of determinations involved in the registration process are such, however, that we do not assume any responsibility for the accuracy, completeness or fairness of the statements contained in the Registration Statement, the Base Prospectus, the Prospectus Supplement **[**or the Pricing Disclosure Package,**]** except for those made under the captions "Description of Preferred Stock We May Offer", **[**"Description of Preferred Stock We May Offer — Fractional or Multiple Shares of Preferred Stock Issued as Depositary Shares",**]** "Legal Ownership and Book-Entry Issuance" and "Plan of Distribution" in the Base Prospectus and "Description of **[**Title of Preferred Shares**]**", **[**"Description of the Depositary Shares"**]** and "Underwriting" in the Prospectus Supplement, in each case insofar as they relate to provisions, therein described, of the Shares**[**, the Deposit Agreement**]** and the Underwriting Agreement relating to the Shares, and except for those made under the caption "United States Taxation – Taxation of Preferred Stock and Depositary Shares" in the Base Prospectus, insofar as they relate to provisions, therein described, of U.S. Federal income tax law applicable to the Shares. Also, we do not express any opinion or belief as to the financial statements or other financial data derived from accounting records contained in the Registration Statement, the Base Prospectus**[**,**]** **[**or**]** the Prospectus Supplement **[**or the Pricing Disclosure Package**]**, or as to the report of management's assessment of the effectiveness of internal control over financial reporting or the auditor's report on the effectiveness of such internal control, each as included in the Registration Statement, the Base Prospectus**[**,**]** **[**or**]** the Prospectus Supplement **[**or the Pricing Disclosure Package**]**.

This letter is furnished by us, as counsel to the Underwriters, to you, as Representative of the Underwriters, solely for the benefit of the Underwriters in their capacity as such, and may not be relied upon by any other person. This letter may not be quoted, referred to or furnished to any purchaser or prospective purchaser of the Shares and may not be used in furtherance of any offer or sale of the Shares.

Very truly yours,

Schedule A

[*List documents other than the Base Prospectus that are included in the Pricing Disclosure Package. Include any Preliminary Prospectus Supplement if prepared by the Company pursuant to the terms of the Underwriting Agreement.***]**

Form of Opinion of General Counsel or Associate General Counsel

(1) The Company has been duly incorporated and is validly existing as a corporation under the laws of the State of Delaware;

(2) The Underwriting Agreement has been duly authorized, executed and delivered by the Company;

(3) The **[**Preferred**]** Shares have been duly authorized, executed, issued and delivered; and

(4) The Deposit Agreement has been duly authorized, executed and delivered by the Company.

In rendering such opinion, such counsel may state that such counsel expresses no opinion as to the laws of any jurisdiction other than the Federal laws of the United States, the laws of the State of New York and the General Corporation Law of the State of Delaware; that, insofar as such opinion involves factual matters, such counsel has relied upon certificates of officers of the Company and its subsidiaries and certificates of public officials and other sources believed by such counsel to be responsible; and **[**that such counsel has assumed that the Deposit Agreement has been duly authorized, executed and delivered by the Depositary,**]** that the certificate evidencing the **[**Preferred**]** Shares conforms to the form thereof examined by such counsel (or members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision) and has been duly countersigned by a transfer agent and duly registered by a registrar of the **[**Preferred**]** Shares and that the signatures on all documents examined by such counsel (or members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision) are genuine, assumptions that such counsel has not independently verified. In addition, such counsel may state that such counsel has examined, or has caused members of the legal department of the Company and certain of its subsidiaries acting under such counsel's supervision to examine, such corporate and partnership records, certificates and other documents, and such questions of law, as such counsel has considered necessary or appropriate for the purposes of such opinion.

Pursuant to Section 9(d) of the Underwriting Agreement, the accountants shall furnish letters to the Underwriters to the effect that:

(i) They are an independent registered public accounting firm with respect to the Company within the meaning of the Act and the applicable published rules and regulations thereunder adopted by the Securities and Exchange Commission (the "SEC") and the Public Company Accounting Oversight Board (United States) (the "PCAOB");

(ii) In their opinion, the financial statements and any supplementary financial information and schedules (and, if applicable, financial forecasts and/or pro forma financial information) audited or examined by them and included or incorporated by reference in the Registration Statement or the Prospectus comply as to form in all material respects with the applicable accounting requirements of the Act or the Exchange Act, as applicable, and the related published rules and regulations thereunder; and, if applicable, they have made a review in accordance with standards established by the PCAOB of the consolidated interim financial statements, selected financial data, pro forma financial information, financial forecasts and/or condensed financial statements derived from audited financial statements of the Company for the periods specified in such letter, as indicated in their reports thereon, copies of which have been furnished to the Underwriters;

(iii) They have made a review in accordance with standards established by the PCAOB of the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included in the Company's Quarterly Report(s) on Form 10-Q covering periods after the latest full fiscal year and incorporated by reference into the Prospectus as indicated in their reports thereon copies of which have been furnished to the Underwriters; and on the basis of specified procedures including inquiries of officials of the Company, who have responsibility for financial and accounting matters regarding whether the unaudited condensed consolidated financial statements referred to in paragraph (vi)(A)(i) below comply as to form in all material respects with the applicable accounting requirements of the Act and the Exchange Act and the related published rules and regulations, nothing came to their attention that caused them to believe that the unaudited condensed consolidated financial statements do not comply as to form in all material respects with the applicable accounting requirements of the Act and the Exchange Act and the related published rules and regulations;

(iv) The unaudited selected financial information with respect to the consolidated results of operations and financial position of the Company for the five most recent fiscal years included in the Prospectus and/or included or incorporated by reference in Item 6 of the Company's Annual Report on Form 10-K for the most recent fiscal year agrees with the corresponding amounts (after restatement where applicable) in the audited consolidated financial statements for such five fiscal years which were included or incorporated by reference in the Company's Annual Reports on Form 10-K for such fiscal years;

(v) They have compared the information in the Prospectus under selected captions with the disclosure requirements of Regulation S-K and on the basis of limited procedures specified in such letter nothing came to their attention as a result of the foregoing procedures that caused them to believe that this information does not conform in all material respects with the disclosure requirements of Items 301, 302 and 503(d), respectively, of Regulation S-K;

(vi) On the basis of limited procedures, not constituting an examination in accordance with generally accepted auditing standards, consisting of a reading of the unaudited financial statements and other information referred to below, a reading of the latest available interim financial statements of the Company and its subsidiaries, inspection of the minute books of the Company and its subsidiaries since the date of the latest audited financial statements included or incorporated by reference in the Prospectus, inquiries of officials of the Company and its subsidiaries responsible for financial and accounting matters and such other inquiries and procedures as may be specified in such letter, nothing came to their attention that caused them to believe that:

(A) (i) the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included or incorporated by reference in the Company's Quarterly Reports on Form 10-Q incorporated by reference in the Prospectus do not comply as to form in all material respects with the applicable accounting requirements of the Exchange Act and the related published rules and regulations, or (ii) any material modifications should be made to the unaudited condensed consolidated statements of income, consolidated balance sheets and consolidated statements of cash flows included in the Prospectus and/or included or incorporated by reference in the Company's Quarterly Report(s) on Form 10-Q incorporated by reference in the Prospectus for them to be in conformity with generally accepted accounting principles;

(B) any other unaudited income statement data and balance sheet items included in the Prospectus do not agree with the corresponding items in the unaudited consolidated financial statements from which such data and items were derived, and any such unaudited data and items were not determined on a basis substantially consistent with the basis for the corresponding amounts in the audited consolidated financial statements included or incorporated by reference in the Company's Annual Report on Form 10-K for the most recent fiscal year;

(C) the unaudited financial statements which were not included in the Prospectus but from which were derived the unaudited condensed financial statements referred to in clause (A) and any unaudited income statement data and balance sheet items included in the Prospectus as most recently amended or supplemented and referred to in clause (B) were not determined on a basis substantially consistent with the basis for the audited financial statements included or incorporated by reference in the Company's Annual Report on Form 10-K for the most recent fiscal year;

(D) any unaudited pro forma consolidated condensed financial statements included or incorporated by reference in the Prospectus do not comply as to form in all material respects with the applicable accounting requirements of the Act and the published rules and regulations thereunder or the pro forma adjustments have not been properly applied to the historical amounts in the compilation of those statements; and

(E) as of a specified date not more than five days prior to the date of such letter, there have been any decrease in shareholders' equity (other than issuances or forfeitures of restricted stock units issued under the Company's Stock Incentive Plan and repurchases of common stock in accordance with the Company's common stock repurchase program or issuances of stock associated with the Company's employee stock option plans), any increase in unsecured long-term borrowings of the Company and its subsidiaries, or any decreases in consolidated total current assets or other items specified by the Representative, or any increases in any items specified by the Representative, in each case as compared with amounts shown in the latest balance sheet included or incorporated by reference in the Prospectus, except in each case for changes, increases or decreases which the Prospectus discloses have occurred or may occur or which are described in such letter.

(vii) In addition to the audit referred to in their report(s) included or incorporated by reference in the Prospectus and the limited procedures, inspection of minute books, inquiries and other procedures referred to in paragraphs (iii) and (vi) above, they have carried out certain specified procedures, not constituting an audit in accordance with generally accepted auditing standards, with respect to certain amounts, percentages and financial information specified by the Representative which are derived from the general accounting records of the Company and its subsidiaries which appear in the Prospectus (excluding documents incorporated by reference), or in Part II of, or in exhibits and schedules to, the Registration Statement specified by the Representative or in documents incorporated by reference in the Prospectus specified by the Representative, and have compared certain of such amounts, percentages and financial information with the accounting records of the Company and its subsidiaries and have found them to be in agreement.

THE GOLDMAN SACHS
AMENDED AND RESTATED
STOCK INCENTIVE PLAN (2018)
(as amended and restated effective as of January 15, 2019)

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THE GOLDMAN SACHS
AMENDED AND RESTATED STOCK INCENTIVE PLAN (2018)
ARTICLE I

GENERAL

1.1 Purpose

The purpose of The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) is to: (i) attract, retain and motivate officers, directors, employees (including prospective employees), consultants and others who may perform services for the Firm (as hereinafter defined), to compensate them for their contributions to the long-term growth and profits of the Firm and to encourage them to acquire a proprietary interest in the success of the Firm, (ii) align the interests of officers, directors, employees, consultants and others who may perform services for the Firm with those of shareholders of GS Inc., (iii) assist the Firm in ensuring that its compensation program does not provide incentives to take imprudent risks and (iv) comply with regulatory requirements.

The Plan was originally adopted by the Board of Directors of GS Inc. (the "Board") on April 30, 1999 as The Goldman Sachs 1999 Stock Incentive Plan (the "1999 SIP") and was amended and restated as The Goldman Sachs Amended and Restated Stock Incentive Plan (the "2003 SIP") by the Board on January 16, 2003, subject to the approval by the shareholders of GS Inc., which approval was obtained on April 1, 2003. The 2003 SIP was further amended and restated, effective as of December 31, 2008, and subsequently amended as of December 20, 2012. The 2003 SIP was amended and restated as The Goldman Sachs Amended and Restated Stock Incentive Plan (2013) (the "2013 SIP") by the Board on March 19, 2013, subject to the approval by the shareholders of GS Inc., which approval was obtained on May 23, 2013. The 2013 SIP was amended and restated as The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "2015 SIP") by the Board on March 6, 2015, subject to the approval by the shareholders of GS Inc., which approval was obtained on May 21, 2015.

The Plan was amended and restated as The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) by the Board on February 22, 2018, subject to the approval by the shareholders of GS Inc., which approval was obtained on May 2, 2018. The Plan was further amended and restated, effective as of January 15, 2019.

The amendments made to the 2015 SIP shall affect only Awards granted on or after the Effective Date (as hereinafter defined). Awards granted prior to the Effective Date shall be governed by the terms of the 2015 SIP (as in effect prior to the Effective Date), 2013 SIP (as in effect prior to the effective date of the 2015 SIP), the 2003 SIP (as in effect prior to the effective date of the 2013 SIP) or the 1999 SIP (as in effect prior to the effective date of the 2003 SIP), as applicable, and the applicable Award Agreements. The terms of this Plan are not intended to affect the interpretation of the terms of the 2015 SIP, the 2013 SIP, the 2003 SIP or the 1999 SIP, as applicable, as they existed prior to the Effective Date.

1.2 Definitions of Certain Terms

Unless otherwise specified in an applicable Award Agreement, the terms listed below shall have the following meanings for purposes of the Plan and any Award Agreement.

1.2.1 "AAA" means the American Arbitration Association.

1.2.2 "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

1.2.3 "Award" means an award made pursuant to the Plan.

1.2.4 "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

1.2.5 "Award Statement" means a written statement that reflects certain Award terms.

1.2.6 "Board" means the Board of Directors of GS Inc.

1.2.7 "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

1.2.8 "Cause" means (a) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (i) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (ii) on a felony charge, or (iii) on an equivalent charge to those in clauses (i) and (ii) in jurisdictions which do not use those designations, (b) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (c) the Grantee's willful failure to perform the Grantee's duties to the Firm, (d) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (e) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (f) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (g) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

1.2.9 "Certificate" means a stock certificate (or other appropriate document or evidence of ownership) representing shares of Common Stock.

1.2.10 "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (a) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (i) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (ii) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (b) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (i) were members of the Board on the Effective Date or (ii) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

1.2.11 "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

1.2.12 "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

1.2.13 "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based"

compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

1.2.14 "Common Stock" means common stock of GS Inc., par value $0.01 per share.

1.2.15 "Competitive Enterprise" means an existing or planned business enterprise that (a) engages, or may reasonably be expected to engage, in any activity; (b) owns or controls, or may reasonably be expected to own or control, a significant interest in any entity that engages in any activity or (c) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably be expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation: financial services such as investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than the Grantee and members of the Grantee's family (including for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading.

1.2.16 "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award or Shares at Risk would result in an actual or perceived conflict of interest.

1.2.17 "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

1.2.18 "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, provided, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

1.2.19 "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

1.2.20 "Effective Date" means the date this Plan is approved by the shareholders of GS Inc. pursuant to Section 3.15 hereof.

1.2.21 "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (a) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (b) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (c) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

1.2.22 "Exchange Act" means the Securities Exchange Act of 1934, as amended from time to time, and the applicable rules and regulations thereunder.

1.2.23 "Exercise Price" means (i) in the case of Options, the price specified in the Grantee's Award Agreement as the price-per-share of Common Stock at which such share can be purchased pursuant to the Option or (ii) in the case of SARs, the price specified in the Grantee's Award Agreement as the reference price-per-share of Common Stock used to calculate the amount payable to the Grantee.

1.2.24 "Expiration Date" means the date specified in the Grantee's Award Agreement as the final expiration date of the Award.

1.2.25 "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

1.2.26 "Fair Market Value" means, with respect to a share of Common Stock on any day, the fair market value as determined in accordance with a valuation methodology approved by the Committee.

1.2.27 "FINRA" means the Financial Industry Regulatory Authority.

1.2.28 "Firm" means GS Inc. and its subsidiaries and affiliates.

1.2.29 "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75)

miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

1.2.30 "Grantee" means a person who receives an Award.

1.2.31 "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

1.2.32 "Incentive Stock Option" means an option to purchase shares of Common Stock that is intended to qualify for special Federal income tax treatment pursuant to Sections 421 and 422 of the Code, as now constituted or subsequently amended, or pursuant to a successor provision of the Code, and which is so designated in the applicable Option Award Agreement.

1.2.33 "Initial Exercise Date" means, with respect to an Option or an SAR, the date specified in the Grantee's Award Agreement as the initial date on which such Award may be exercised, provided, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

1.2.34 "1999 SIP" means The Goldman Sachs 1999 Stock Incentive Plan, as in effect prior to the effective date of the 2003 SIP.

1.2.35 "New York Stock Exchange" means the New York Stock Exchange, Inc. and any successor exchange or trading market that is the principal trading market for the Common Stock.

1.2.36 "Nonqualified Stock Option" means an option to purchase shares of Common Stock that is not an Incentive Stock Option.

1.2.37 "Option" means an Incentive Stock Option or a Nonqualified Stock Option or both, as the context requires.

1.2.38 "Outstanding" means any Award to the extent it has not been forfeited, canceled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

1.2.39 "Plan" means The Goldman Sachs Amended and Restated Stock Incentive Plan (2018), as described herein and as hereafter amended from time to time.

1.2.40 "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

1.2.41 "RSU Shares" means shares of Common Stock that underlie an RSU.

1.2.42 "Restricted Share" means a share of Common Stock delivered under the Plan that is subject to Transfer Restrictions, forfeiture provisions and/or other terms and conditions specified herein and in the Restricted Share Award Agreement or other applicable Award Agreement. All references to Restricted Shares include "Shares at Risk."

1.2.43 "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

1.2.44 "SAR" means a stock appreciation right granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock, cash or other property equal in value to the excess of the Fair Market Value per share of Common Stock over the Exercise Price per share of the SAR, subject to the terms of the SAR Award Agreement.

1.2.45 "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

1.2.46 "Shares at Risk" means Restricted Shares that are designated as "Shares at Risk" in the applicable Award Agreement.

1.2.47 "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

1.2.48 "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

1.2.49 "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

1.2.50 "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal of (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

1.2.51 "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

1.2.52 "2003 SIP" means The Goldman Sachs Amended and Restated Stock Incentive Plan, as in effect prior to the effective date of the 2013 SIP.

1.2.53 "2013 SIP" means The Goldman Sachs Amended and Restated Stock Incentive Plan (2013), as in effect prior to the effective date of the 2015 SIP.

1.2.54 "2015 SIP" means The Goldman Sachs Amended and Restated Stock Incentive Plan (2015), as in effect prior to the Effective Date.

1.2.55 "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

1.2.56 "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

1.2.57 "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (provided that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

1.3 Administration

1.3.1 Subject to Sections 1.3.3 and 1.3.4, the Plan shall be administered by the Committee.

1.3.2 The Committee shall have complete control over the administration of the Plan and shall have the authority in its sole discretion to (a) exercise all of the powers granted to it under the Plan, (b) construe, interpret and implement the Plan and all Award Agreements, (c) prescribe, amend and rescind rules and regulations relating to the Plan, including rules governing its own operations, (d) make all determinations necessary or advisable in administering the Plan, (e) correct any defect, supply any omission and reconcile any inconsistency in the Plan, (f) amend the Plan to reflect changes in applicable law (whether or not the rights of the Grantee of any Award are adversely affected, unless otherwise provided in such Grantee's Award Agreement), (g) grant Awards and determine who shall receive Awards, when such Awards shall be granted and the terms of such Awards, including setting forth provisions

with regard to termination of Employment, such as termination of Employment for Cause or due to death, Conflicted Employment, Extended Absence or Retirement, (h) unless otherwise provided in an Award Agreement, amend any outstanding Award Agreement in any respect, whether or not the rights of the Grantee of such Award are adversely affected, including, without limitation, to (1) accelerate the time or times at which the Award becomes Vested, unrestricted or may be exercised (and, in connection with such acceleration, the Committee may provide that any shares of Common Stock acquired pursuant to such Award shall be Restricted Shares, which are subject to vesting, transfer, forfeiture or repayment provisions similar to those in the Grantee's underlying Award), (2) accelerate the time or times at which shares of Common Stock are delivered under the Award (and, without limitation on the Committee's rights, in connection with such acceleration, the Committee may provide that any shares of Common Stock delivered pursuant to such Award shall be Restricted Shares, which are subject to vesting, transfer, forfeiture or repayment provisions similar to those in the Grantee's underlying Award), (3) waive or amend any goals, restrictions or conditions set forth in such Award Agreement, or impose new goals, restrictions and conditions or (4) reflect a change in the Grantee's circumstances (e.g., a change to part-time employment status or a change in position, duties or responsibilities) and (i) determine at any time whether, to what extent and under what circumstances and method or methods (1) Awards may be (A) settled in cash, shares of Common Stock, other securities, other Awards or other property (in which event, the Committee may specify what other effects such settlement will have on the Grantee's Award, including the effect on any repayment provisions under the Plan or Award Agreement), (B) exercised (including a "cashless" exercise) or (C) canceled, forfeited or suspended, (2) shares of Common Stock, other securities, other Awards or other property and other amounts payable with respect to an Award may be deferred either automatically or at the election of the Grantee thereof or of the Committee and (3) Awards may be settled by GS Inc., any of its subsidiaries or affiliates or any of its or their designees.

1.3.3 Actions of the Committee may be taken by the vote of a majority of its members present at a meeting (which may be held telephonically). Any action may be taken by a written instrument signed by a majority of the Committee members, and action so taken shall be fully as effective as if it had been taken by a vote at a meeting. The determination of the Committee on all matters relating to the Plan or any Award Agreement shall be final, binding and conclusive. The Committee may allocate among its members and delegate to any person who is not a member of the Committee or to any administrative group within the Firm, including the SIP Committee, the SIP Administrators or any of them, any of its powers, responsibilities or duties. In delegating its authority, the Committee shall consider the extent to which any delegation may cause Awards to fail to meet the requirements of Rule 16(b)-3(d)(1) or Rule 16(b)-3(e) under the Exchange Act.

1.3.4 Notwithstanding anything to the contrary contained herein, the Board may, in its sole discretion, at any time and from time to time, grant Awards or administer the Plan. In any such case, the Board shall have all of the authority and responsibility granted to the Committee herein.

1.3.5 No Liability. No member of the Board or the Committee or any employee of the Firm (each such person, a "Covered Person") shall have any liability to any person (including any Grantee) for any action taken or omitted to be taken or any determination made in good faith with respect to the Plan or any Award. Each Covered Person shall be indemnified and held harmless by GS Inc. against and from (a) any loss, cost, liability or expense (including attorneys' fees) that may be imposed upon or incurred by such Covered Person in connection with or resulting from any action, suit or proceeding to which such Covered Person may be a party or in which such Covered Person may be involved by reason of any action taken or omitted to be taken under the Plan or any Award Agreement and (b) any and all amounts paid by such Covered Person, with GS Inc.'s approval, in settlement thereof, or paid by such Covered Person in satisfaction of any judgment in any such action, suit or proceeding against such Covered Person, provided that GS Inc. shall have the right, at its own expense, to assume and defend any such action, suit or proceeding and, once GS Inc. gives notice of its intent to assume the defense, GS Inc. shall have sole control over such defense with counsel of GS Inc.'s choice. The foregoing right of indemnification shall not be available to a Covered Person to the extent that a court of competent jurisdiction in a final judgment or other final adjudication, in either case not subject to further appeal, determines that the acts or omissions of such Covered Person giving rise to the indemnification claim resulted from such Covered Person's bad faith, fraud or willful criminal act or omission. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which Covered Persons may be entitled under GS Inc.'s Restated Certificate of Incorporation, as may be amended from time to time, or Amended and Restated Bylaws, as may be amended from time to time, as a matter of law, or otherwise, or any other power that GS Inc. may have to indemnify such persons or hold them harmless.

1.4 Persons Eligible for Awards

Awards under the Plan may be made to such current, former (solely with respect to their final year of service) and prospective officers, directors, employees, consultants and other individuals who may perform services for the Firm, as the Committee may select.

1.5 Types of Awards Under Plan

Awards may be made under the Plan in the form of (a) Options, (b) SARs, (c) Restricted Shares, (d) RSUs, (e) Dividend Equivalent Rights and (f) other equity-based or equity-related Awards that the Committee determines are consistent with the purpose of the Plan and the interests of the Firm. No Incentive Stock Option (other than an Incentive Stock Option that may be assumed or issued by GS Inc. in connection with a transaction to which Section 424(a) of the Code applies) may be granted to a person who is not eligible to receive an Incentive Stock Option under the Code.

1.6 Shares Available for Awards

1.6.1 Total Shares Available. Subject to adjustment pursuant to Section 1.6.2, the total number of shares of Common Stock which may be delivered pursuant to Awards granted under the Plan on or after the Effective Date shall be the number of shares available for awards under the 2015 SIP as of the Effective Date. Each Option, SAR, Restricted Share, RSU or similar Award or share of Common Stock underlying an Award shall count as one share of Common Stock. No further Awards shall be granted pursuant to the 2015 SIP. If, on or after the

Effective Date, any Award or any outstanding award granted under the 2015 or 2013 SIP ("2015 or 2013 SIP Award") is forfeited or otherwise terminates or is canceled without the delivery of shares of Common Stock, shares of Common Stock are surrendered or withheld from any Award or 2015 or 2013 SIP Award to satisfy any obligation of the Grantee (including Federal, state or foreign taxes) or shares of Common Stock owned by a Grantee are tendered to pay the exercise price of any Award, then the shares covered by such forfeited, terminated or canceled Award or 2015 or 2013 SIP Award or which are equal to the number of shares surrendered, withheld or tendered shall again become available to be delivered pursuant to Awards granted under this Plan. Notwithstanding the foregoing, but subject to adjustment as provided in Section 1.6.2, no more than twenty-four million (24,000,000) shares of Common Stock that can be delivered under the Plan shall be deliverable pursuant to the exercise of Incentive Stock Options. The maximum number of shares of Common Stock with respect to which Options or SARs may be granted to an individual Grantee in any fiscal year shall equal one million (1,000,000) shares of Common Stock. Any shares of Common Stock (a) delivered by GS Inc., (b) with respect to which Awards are made hereunder and (c) with respect to which the Firm becomes obligated to make Awards, in each case through the assumption of, or in substitution for, outstanding awards previously granted by an acquired entity, shall not count against the shares of Common Stock available to be delivered pursuant to Awards under this Plan. Shares of Common Stock that may be delivered pursuant to Awards may be authorized but unissued Common Stock or authorized and issued Common Stock held in GS Inc.'s treasury or otherwise acquired for the purposes of the Plan.

1.6.2 Adjustments. The Committee shall adjust the number of shares of Common Stock authorized pursuant to Section 1.6.1 and shall adjust (including, without limitation, by payment of cash) the terms of any Outstanding Awards (including, without limitation, the number of shares of Common Stock covered by each Outstanding Award, the type of property to which the Award relates and the exercise or strike price of any Award), in such manner as it deems appropriate to prevent the enlargement or dilution of rights, for any increase or decrease in the number of issued shares of Common Stock (or issuance of shares of stock other than shares of Common Stock) resulting from a recapitalization, stock split, reverse stock split, stock dividend, spinoff, splitup, combination, reclassification or exchange of shares of Common Stock, merger, consolidation, rights offering, separation, reorganization or any other change in corporate structure or event the Committee determines in its sole discretion affects the capitalization of GS Inc.; provided, however, that no such adjustment shall be required if the Committee determines that such action would cause an award to fail to satisfy the conditions of an applicable exception from the requirements of Section 409A or otherwise would subject a Grantee to an additional tax imposed under Section 409A in respect of an Outstanding Award. After any adjustment made pursuant to this Section 1.6.2, the number of shares of Common Stock subject to each Outstanding Award shall be rounded up or down to the nearest whole number as determined by the Committee.

1.6.3 Except as provided in this Section 1.6 or under the terms of any applicable Award Agreement, there shall be no limit on the number or the value of shares of Common Stock that may be subject to Awards to any individual under the Plan.

1.6.4 There shall be no limit on the amount of cash, securities (other than shares of Common Stock as provided in Section 1.6.1, as adjusted by Section 1.6.2) or other property that may be delivered pursuant to any Award.

ARTICLE II

AWARDS UNDER THE PLAN

2.1 Agreements Evidencing Awards

Each Award granted under the Plan shall be evidenced by an Award Agreement, which shall contain such provisions and conditions as the Committee deems appropriate (and which may incorporate by reference some or all of the provisions of the Plan). The Committee may grant Awards in tandem with or in substitution for any other Award or Awards granted under this Plan or any award granted under any other plan of the Firm. By accepting an Award pursuant to the Plan, a Grantee thereby agrees that the Award shall be subject to all of the terms and provisions of the Plan and the applicable Award Agreement.

2.2 No Rights as a Shareholder

No Grantee (or other person having rights pursuant to an Award) shall have any of the rights of a shareholder of GS Inc. with respect to shares of Common Stock subject to an Award until the delivery of such shares. Except as otherwise provided in Section 1.6.2, no adjustments shall be made for dividends or distributions on (whether ordinary or extraordinary, and whether in cash, Common Stock, other securities or other property), or other events relating to, shares of Common Stock subject to an Award for which the record date is prior to the date such shares are delivered.

2.3 Options

2.3.1 Grant. Subject to the individual limit described in Section 1.6.1, the Committee may grant Awards of Options in such amounts and subject to such terms and conditions as the Committee may determine (and may include a grant of Dividend Equivalent Rights under Section 2.8 in connection with such Option grants); provided, however, that (i) the Exercise Price for any Option may not be less than the lesser of (A) the closing price of a share of Common Stock on the New York Stock Exchange on the Date of Grant for such Option and (B) the average of the high and low sale prices of a share of Common Stock on the New York Stock Exchange on the Date of Grant for such Option and (ii) the Expiration Date in respect of an Option may not be later than the tenth anniversary of the Date of Grant. Except as provided for in Section 1.6.2, the Exercise Price for any Outstanding Option may not be reduced after the Date of Grant.

2.3.2 Exercise. Options that are not Vested or that are not Outstanding may not be exercised. Outstanding Vested Options may be exercised in accordance with procedures established by the Committee (but, subject to the applicable Award Agreement, may not be exercised earlier than the Initial Exercise Date). The Committee may from time to time prescribe periods during which Outstanding Vested Options shall not be exercisable.

2.3.3 Payment of Exercise Price. Any acceptance by the Committee of a Grantee's written notice of exercise of a Vested Option shall be conditioned upon payment for the shares of Common Stock being purchased. Such payment may be made in cash or by such other methods as the Committee may from time to time prescribe.

2.3.4 Delivery of Shares. Unless otherwise determined by the Committee, or as otherwise provided in the applicable Award Agreement, and except as provided in Sections 3.3, 3.4, 3.11 and 3.17.1, and subject to Section 3.2, upon receipt of payment of the full Exercise Price (or upon satisfaction of procedures adopted by the Committee in connection with a "cashless" exercise method adopted by it) for shares of Common Stock subject to an Outstanding Vested Option, delivery of such shares of Common Stock shall be effected by book-entry credit to the Grantee's Account. The Grantee shall be the beneficial owner and record holder of such shares of Common Stock properly credited to the Account. No delivery of such shares of Common Stock shall be made to a Grantee unless the Grantee has timely returned all required documentation specified in the Grantee's Award Agreement or as otherwise required by the Committee or the SIP Administrator.

2.3.5 Repayment if Conditions Not Met. If the Committee determines that all terms and conditions of the Plan and a Grantee's Option Award Agreement in respect of exercised Options were not satisfied, then the Grantee shall be obligated immediately upon demand therefor, as determined by the Firm in its sole discretion, to either: (i) return to the Firm such number of shares of Common Stock that were delivered in excess of the Exercise Price paid therefor or (ii) pay the Firm an amount equal to the excess of the Fair Market Value (determined at the time of exercise) of the shares of Common Stock that were delivered in respect of such exercised Options over the Exercise Price paid therefor, in each case, without reduction for any shares of Common Stock, cash or other property applied to satisfy withholding tax or other obligations in respect of such shares.

2.4 SARs

2.4.1 Grant. Subject to the individual limit described in Section 1.6.1, the Committee may grant Awards of SARs in such amounts and subject to such terms and conditions as the Committee may determine (and may include a grant of Dividend Equivalent Rights under Section 2.8 in connection with such SAR grants); provided, however, that (i) the Exercise Price for any SAR may not be less than the lesser of (A) the closing price of a share of Common Stock on the New York Stock Exchange on the Date of Grant for such SAR and (B) the average of the high and low sale prices of a share of Common Stock on the New York Stock Exchange on the Date of Grant for such SAR and (ii) the Expiration Date in respect of an SAR may not be later than the tenth anniversary of the Date of Grant. Except as provided for in Section 1.6.2, the Exercise Price for any SAR may not be reduced after the Date of Grant.

2.4.2 Exercise. SARs that are not Vested or that are not Outstanding may not be exercised. Outstanding Vested SARs may be exercised in accordance with procedures established by the Committee (but, subject to the applicable Award Agreement, may not be exercised earlier than the Initial Exercise Date). The Committee may from time to time prescribe periods during which Outstanding Vested SARs shall not be exercisable.

2.4.3 Delivery of Shares. Unless otherwise determined by the Committee, or as otherwise provided in the applicable Award Agreement, and except as provided in Sections 3.3, 3.4, 3.11 and 3.17.1, and subject to Section 3.2, upon exercise of an Outstanding Vested SAR for which payment will be made partly or entirely in shares of Common Stock, delivery of shares of Common Stock (and cash in respect of fractional shares), with a Fair Market Value (on the exercise date) equal to (i) the excess of (a) the Fair Market Value of a share of Common Stock (on the exercise date) over (b) the Exercise Price of such SAR multiplied by (ii) the number of SARs exercised, shall be effected by book-entry credit to the Grantee's Account. The Grantee shall be the beneficial owner and record holder of such shares of Common Stock properly credited to the Account on such date of delivery. No delivery of such shares of Common Stock shall be made to a Grantee unless the Grantee has timely returned all required documentation specified in the Grantee's Award Agreement or as otherwise required by the Committee or the SIP Administrator.

2.4.4 Repayment if Conditions Not Met. If the Committee determines that all terms and conditions of the Plan and a Grantee's SAR Award Agreement in respect of exercised SARs were not satisfied, then the Grantee shall be obligated immediately upon demand therefor, as determined by the Firm in its sole discretion, to either: (i) return to the Firm such number of shares of Common Stock that were delivered in excess of the Exercise Price paid therefor or (ii) pay the Firm an amount equal to the excess of the Fair Market Value (determined at the time of exercise) of the shares of Common Stock subject to the exercised SARs over the Exercise Price therefor, in each case, without reduction for any shares of Common Stock, cash or other property applied to satisfy withholding tax or other obligations in respect of such SARs.

2.5 Restricted Shares

2.5.1 Grant. The Committee may grant or offer for sale Awards of Restricted Shares in such amounts and subject to such terms and conditions as the Committee may determine. Upon the issuance of such shares in the name of the Grantee, the Grantee shall have the rights of a shareholder with respect to the Restricted Shares and shall become the record holder of such shares, subject to the provisions of the Plan and any restrictions and conditions as the Committee may include in the applicable Award Agreement. In the event that a Certificate is issued in respect of Restricted Shares, such Certificate may be registered in the name of the Grantee but, unless otherwise determined by the Committee, shall be held by a custodian (which may be GS Inc. or one of its affiliates) until the time the restrictions lapse.

2.5.2 Condition to Grant. Any grant or offer for sale of Awards of Restricted Shares is subject to the Grantee's irrevocable grant of full power and authority to GS Inc. to register in GS Inc.'s name, or that of any designee, any and all Restricted Shares that have been or may be delivered to the Grantee, and the Grantee's irrevocable authorization of GS Inc., or its designee, to sell, assign or transfer such shares to GS Inc. or such other persons as it may determine in the event of a forfeiture of such shares pursuant to any Award Agreement.

2.5.3 Repayment if Conditions Not Met. If the Committee determines that all terms and conditions of the Plan and a Grantee's Restricted Share Award Agreement (or other Award Agreement which provides for delivery of Restricted Shares) in respect of Restricted Shares which have become Vested (or for which Transfer Restrictions have been released) were not satisfied, then the Grantee shall be obligated immediately upon demand therefor, as determined by the Firm in its sole discretion, to either: (i) return to the Firm such number of Restricted Shares for which such terms and conditions were not satisfied or (ii) pay an amount equal to the Fair Market Value (determined at the time such shares became Vested, or at the time Transfer Restrictions were released, as applicable) of such Restricted Shares, in each case, without reduction for any shares of Common Stock, cash or other property applied to satisfy withholding tax or other obligations in respect of such Restricted Shares.

2.6 RSUs

2.6.1 Grant. The Committee may grant Awards of RSUs in such amounts and subject to such terms and conditions as the Committee may determine. A Grantee of an RSU has only the rights of a general unsecured creditor of GS Inc. until delivery of shares of Common Stock, cash or other securities or property is made as specified in the applicable Award Agreement.

2.6.2 Delivery of Shares. Unless otherwise determined by the Committee, or as otherwise provided in the applicable Award Agreement, and except as provided in Sections 3.3, 3.4, 3.11 and 3.17.3, and subject to Section 3.2, on each Delivery Date the number or percentage of RSU Shares specified in the Grantee's Award Agreement with respect to the Grantee's then Outstanding Vested RSUs (which amount may be rounded to avoid fractional RSU Shares) shall be delivered. Unless otherwise determined by the Committee, or as otherwise provided in the applicable Award Agreement, delivery of RSU Shares shall be effected by book-entry credit to the Grantee's Account. The Grantee shall be the beneficial owner and record holder of any RSU Shares properly credited to the Grantee's Account. No delivery of shares of Common Stock underlying a Grantee's RSUs shall be made unless the Grantee has timely returned all required documentation specified in the Grantee's Award Agreement or as otherwise determined by the Committee or the SIP Administrator.

2.6.3 Repayment if Conditions Not Met. If the Committee determines that all terms and conditions of the Plan and a Grantee's RSU Award Agreement in respect of the delivery of shares underlying such RSUs were not satisfied, then the Grantee shall be obligated immediately upon demand therefor, as determined by the Firm in its sole discretion, to either: (i) return to the Firm such number of the shares of Common Stock delivered in respect of such RSUs for which such terms and conditions were not satisfied or (ii) pay the Firm an amount equal to the Fair Market Value (determined at the time of delivery) of the shares of Common Stock delivered with respect to such Delivery Date, in each case, without reduction for any shares of Common Stock, cash or other property applied to satisfy withholding tax or other obligations in respect of such shares of Common Stock.

2.7 Other Stock-Based Awards

The Committee may grant other types of equity-based or equity-related Awards (including the grant or offer for sale of unrestricted shares of Common Stock) in such amounts and subject to such terms and conditions as the Committee shall determine. Such Awards may entail the transfer of actual shares of Common Stock to Plan participants, or payment in cash or otherwise of amounts based on the value of shares of Common Stock, and may include, without limitation, Awards designed to comply with or take advantage of the applicable local laws of jurisdictions other than the United States.

2.8 Dividend Equivalent Rights

2.8.1 Grant. The Committee may grant, either alone or in connection with any other Award, a Dividend Equivalent Right.

2.8.2 Payment. The Committee shall determine whether payments in connection with a Dividend Equivalent Right shall be made in cash, in shares of Common Stock or in another form, whether they shall be conditioned upon the exercise of any Award to which they relate, the time or times at which they shall be made and such other terms and conditions as the Committee shall deem appropriate. No payments will be made in respect of any Dividend Equivalent Right at a time when any performance-based goals that apply to the Dividend Equivalent Right or Award that is granted in connection with a Dividend Equivalent Right have not been satisfied (as determined by the Firm in its sole discretion).

2.8.3 Repayment if Conditions Not Met. If the Committee determines that all terms and conditions of the Plan and a Grantee's Award Agreement in respect of which a Dividend Equivalent Right was granted were not satisfied (including the terms and conditions of any other Award that was granted in connection with the Dividend Equivalent Right), then the Grantee shall be obligated to pay the Firm immediately upon demand therefor, any payments in connection with such Dividend Equivalent Right (and, if such payments in respect of the Dividend Equivalent Right were made in a form other than cash, as determined by the Firm in its sole discretion, either return to the Firm the property paid in respect of such Dividend Equivalent Right or an amount equal to the Fair Market Value of such payment determined at the time of payment), without reduction for any amount applied to satisfy withholding tax or other obligations in respect of such payments.

ARTICLE III

MISCELLANEOUS

3.1 Amendment of the Plan or Award Agreement

3.1.1 Unless otherwise provided in the Plan or in an Award Agreement, the Board may from time to time suspend, discontinue, revise or amend the Plan in any respect whatsoever, including in any manner that adversely affects the rights, duties or obligations of any Grantee of an Award.

3.1.2 Unless otherwise determined by the Board, shareholder approval of any suspension, discontinuance, revision or amendment shall be obtained only to the extent necessary to comply with any applicable law, rule or regulation; provided, however, if and to the extent the Board determines it is appropriate for the Plan to comply with the provisions of Section 422 of the Code, no amendment that would require shareholder approval under Section 422 of the Code shall be effective without the approval of the shareholders of GS Inc.

3.2 Tax Withholding

3.2.1 As a condition to the delivery of any shares of Common Stock, other property or cash pursuant to any Award or the lifting or lapse of restrictions on any Award, or in connection with any other event that gives rise to a Federal or other governmental tax withholding obligation on the part of the Firm relating to an Award (including, without limitation, FICA tax), (a) the Firm may deduct or withhold (or cause to be deducted or withheld) from any payment or distribution to the Grantee, whether or not pursuant to the Plan, (b) the Committee shall be entitled to require that the Grantee remit cash to the Firm (through payroll deduction or otherwise) or (c) the Firm may enter into any other suitable arrangements to withhold, in each case in an amount sufficient in the opinion of the Firm to satisfy such withholding obligation.

3.2.2 If the event giving rise to the withholding obligation involves a transfer of shares of Common Stock, then, at the discretion of the Committee, the Grantee may satisfy the withholding obligation described under Section 3.2.1 by electing to have GS Inc. withhold shares of Common Stock (which withholding, unless otherwise provided in the applicable Award Agreement, will be at a rate not in excess of the statutory maximum rate) or by tendering previously owned shares of Common Stock, in each case having a Fair Market Value equal to the amount of tax to be withheld (or by any other mechanism as may be required or appropriate to conform with local tax and other rules). For this purpose, Fair Market Value shall be determined as of the date on which the amount of tax to be withheld is determined, which may, as determined by the Committee, be the closing price of a share of Common Stock on the New York Stock Exchange on the trading day immediately prior to the date shares of Common Stock (or cash or other property) are delivered in respect of RSUs (and GS Inc. may cause any fractional share amount to be settled in cash).

3.3 Required Consents and Legends

3.3.1 If the Committee shall at any time determine that any consent (as hereinafter defined) is necessary or desirable as a condition of, or in connection with, the granting of any Award, the delivery of shares of Common Stock or the delivery of any cash, securities or other property under the Plan, or the taking of any other action thereunder (each such action being hereinafter referred to as a "plan action"), then such plan action shall not be taken, in whole or in part, unless and until such consent shall have been effected or obtained to the full satisfaction of the Committee. The Committee may direct that any Certificate evidencing shares delivered pursuant to the Plan shall bear a legend setting forth such restrictions on transferability as the Committee may determine to be necessary or desirable, and may advise the transfer agent to place a stop order against any legended shares.

3.3.2 By accepting an Award, each Grantee shall have expressly provided consent to the items described in Section 3.3.3(d) hereof.

3.3.3 The term "consent" as used herein with respect to any plan action includes (a) any and all listings, registrations or qualifications in respect thereof upon any securities exchange or under any Federal, state or local law, or law, rule or regulation of a jurisdiction outside the United States, (b) any and all written agreements and representations by the Grantee with respect to the disposition of shares, or with respect to any other matter, which the Committee may deem necessary or desirable to comply with the terms of any such listing, registration or qualification or to obtain an exemption from the requirement that any such listing, qualification or registration be made, (c) any and all other consents, clearances and approvals in respect of a plan action by any governmental or other regulatory body or any stock exchange or self-regulatory agency, (d) any and all consents by the Grantee to (i) the Firm's supplying to any third party recordkeeper of the Plan such personal information as the Committee deems advisable to administer the Plan, (ii) the Firm's deducting amounts from the Grantee's wages, or another arrangement satisfactory to the Committee, to reimburse the Firm for advances made on the Grantee's behalf to satisfy certain withholding and other tax obligations in connection with an Award and (iii) the Firm's imposing sales and transfer procedures and restrictions and hedging restrictions on shares of Common Stock delivered under the Plan and (e) any and all consents or authorizations required to comply with, or required to be obtained under, applicable local law or otherwise required by the Committee. Nothing herein shall require GS Inc. to list, register or qualify the shares of Common Stock on any securities exchange.

3.4 Right of Offset

The Firm shall have the right to offset against its obligation to (i) deliver shares of Common Stock (or other property or cash), (ii) release restrictions and/or other terms and conditions in respect of Restricted Shares or (iii) pay dividends or payments under Dividend Equivalent Rights (granted alone or in connection with any Award), in each case, under the Plan or any Award Agreement any outstanding amounts (including, without limitation, travel and entertainment or advance account balances, loans, repayment obligations under any Awards, or amounts repayable to the Firm pursuant to tax equalization, housing, automobile or other employee programs) the Grantee then owes to the Firm and any amounts the Committee otherwise deems appropriate pursuant to any tax equalization policy or agreement.

3.5 Nonassignability

3.5.1 Except to the extent otherwise expressly provided in the applicable Award Agreement and Sections 3.5.2 and 3.5.3 below, no Award (or any rights and obligations thereunder) granted to any person under the Plan may be sold, exchanged, transferred, assigned, pledged, hypothecated, fractionalized, hedged or otherwise disposed of (including through the use of any cash-settled instrument), whether voluntarily or involuntarily, other than by will or by the laws of descent and distribution, and all such Awards (and any rights thereunder) shall be exercisable during the life of the Grantee only by the Grantee or the Grantee's legal representative. Notwithstanding the preceding sentence, the Committee may permit, under such terms and conditions that it deems appropriate in its sole discretion, a Grantee to transfer any Award to any person or entity that the Committee so determines. Any sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the provisions of this Section 3.5 shall be void. All of the terms and conditions of this Plan and the Award Agreements shall be binding upon any permitted successors and assigns.

3.5.2 The Committee may adopt procedures pursuant to which some or all Grantees of RSUs or Restricted Shares may transfer some or all of their RSUs or Restricted Shares, in each case, which shall continue to be subject to the same terms and conditions on such Award, through a gift for no consideration to any immediate family member (as determined pursuant to the procedures) or a trust in which the recipient and/or the recipient's immediate family members in the aggregate have 100% (or such lesser amount as determined by the Committee from time to time) of the beneficial interest (as determined pursuant to the procedures).

3.5.3 The Committee may adopt procedures pursuant to which a Grantee may be permitted to specifically bequeath some or all of the Grantee's Outstanding RSUs under the Grantee's will to an organization described in Sections 501(c)(3) and 2055(a) of the Code (or such other similar charitable organization as may be approved by the Committee).

3.6 Requirement of Consent and Notification of Election Under Section 83(b) of the Code or Similar Provision

No election under Section 83(b) of the Code (to include in gross income in the year of transfer the amounts specified in Code Section 83(b)) or under a similar provision of the law of a jurisdiction outside the United States may be made unless expressly permitted by the terms of the Award Agreement or by action of the Committee in writing prior to the making of such election. If a Grantee of an Award, in connection with the acquisition of shares of Common Stock under the Plan or otherwise, is expressly permitted under the terms of the Award Agreement or by such Committee action to make any such election and the Grantee makes the election, the Grantee shall notify the Committee of such election within ten (10) days of filing notice of the election with the Internal Revenue Service or other governmental authority, in addition to any filing and notification required pursuant to regulations issued under Code Section 83(b) or other applicable provision.

3.7 Requirement of Notification Upon Disqualifying Disposition Under Section 421(b) of the Code

If any Grantee shall make any disposition of shares of Common Stock delivered pursuant to the exercise of an Incentive Stock Option under the circumstances described in Section 421(b) of the Code (relating to certain disqualifying dispositions), such Grantee shall notify GS Inc. of such disposition within ten (10) days thereof.

3.8 Change in Control

3.8.1 The Committee may provide in any Award Agreement for provisions relating to a Change in Control, including, without limitation, the acceleration of the vesting, delivery or exercisability of, or the lapse of restrictions or deemed satisfaction of goals with respect to, any Outstanding Awards and Shares at Risk; provided, however, that, in addition to any conditions provided for in the Award Agreement, any acceleration of the vesting, delivery or exercisability of, or the lapse of restrictions or deemed satisfaction of goals with respect to, any Outstanding Awards and Shares at Risk in connection with a Change in Control may occur only if (i) the Change in Control occurs and (ii) the Grantee's Employment is terminated by the Firm without Cause or by the Grantee for Good Reason within 18 months following such Change in Control.

3.8.2 Unless otherwise provided in the applicable Award Agreement and except as otherwise determined by the Committee, in the event of a merger, consolidation, mandatory share exchange or other similar business combination of GS Inc. with or into any other entity ("successor entity") or any transaction in which another person or entity acquires all of the issued and outstanding Common Stock of GS Inc., or all or substantially all of the assets of GS Inc., Outstanding Awards and Shares at Risk may be assumed or a substantially equivalent Award may be substituted by such successor entity or a parent or subsidiary of such successor entity, and such an assumption or substitution shall not be deemed to violate this Plan or any provision of any Award Agreement.

3.9 Other Conditions to Awards

Unless the Committee determines otherwise, the Grantee's rights in respect of all of his or her Outstanding Awards and Shares at Risk (whether or not Vested) shall immediately terminate, such Awards shall cease to be Outstanding and such Shares at Risk shall be cancelled if: (a) the Grantee attempts to have any dispute under the Plan or his or her Award Agreement resolved in any manner that is not provided for by Section 3.17 and the Award Agreement, (b) the Grantee in any manner, directly or indirectly, (1) Solicits any Client to transact business with a Competitive Enterprise or to reduce or refrain from doing any business with the Firm or (2) interferes with or damages (or attempts to interfere with or damage) any relationship between the Firm and any Client or (3) Solicits any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment (or any other association) with any person or

entity other than the Firm, (c) the Grantee fails to certify to GS Inc., in accordance with procedures established by the Committee, that the Grantee has complied, or the Committee determines that the Grantee in fact has failed to comply, with all the terms and conditions of the Plan or Award Agreement, (d) any event constituting Cause occurs with respect to the Grantee, (e) the Committee determines that the Grantee failed to meet, in any respect, any obligation the Grantee may have under any agreement between the Grantee and the Firm, or any agreement entered into in connection with the Grantee's Employment with the Firm or the Grantee's Award, (f) as a result of any action brought by the Grantee, it is determined that any of the terms or conditions for delivery of shares of Common Stock (or cash or other property) in respect of an Award are invalid or (g) the Grantee's Employment terminates for any reason or the Grantee is otherwise no longer actively Employed with the Firm and an entity to which the Grantee provide services grants the Grantee cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Award. By exercising any Option or SAR or by accepting delivery of shares of Common Stock (including, for the avoidance of doubt, in the case of Restricted Shares, accepting Restricted Shares for which Transfer Restrictions are released), payment in respect of Dividend Equivalent Rights or any other payment under this Plan, the Grantee shall be deemed to have represented and certified at such time that the Grantee has complied with all the terms and conditions of the Plan and the Award Agreement.

3.10 Right of Discharge Reserved

Neither the grant of an Award nor any provision in the Plan or in any Award Agreement shall confer upon any Grantee the right to continued Employment by the Firm or affect any right that the Firm may have to terminate or alter the terms and conditions of the Grantee's Employment.

3.11 Nature and Form of Payments

3.11.1 Any and all grants of Awards and deliveries of shares of Common Stock, cash or other property under the Plan shall be in consideration of services performed or to be performed for the Firm by the Grantee. Awards under the Plan may, in the sole discretion of the Committee, be made in substitution in whole or in part for cash or other compensation otherwise payable to an Employee. Without limitation on Section 1.3 hereof, unless otherwise specifically provided in an Award Agreement or by applicable law, the Committee shall be permitted with respect to any or all Awards to exercise all of the rights described in Sections 1.3.2(h) and 1.3.2(i). Deliveries of shares of Common Stock may be rounded to avoid fractional shares. In addition, the Firm may pay cash in lieu of fractional shares.

3.11.2 All grants of Awards and deliveries of shares of Common Stock, cash or other property under the Plan shall constitute a special discretionary incentive payment to the Grantee and shall not be required to be taken into account in computing the amount of salary or compensation of the Grantee for the purpose of determining any contributions to or any benefits under any pension, retirement, profit-sharing, bonus, life insurance, severance or other benefit plan of the Firm or under any agreement with the Grantee, unless the Firm specifically provides otherwise.

3.12 Non-Uniform Determinations

None of Committee's determinations under the Plan and Award Agreements need to be uniform and any such determinations may be made by it selectively among persons who receive, or are eligible to receive, Awards under the Plan (whether or not such persons are similarly situated). Without limiting the generality of the foregoing, the Committee shall be entitled, among other things, to make non-uniform and selective determinations under Award Agreements, and to enter into non-uniform and selective Award Agreements, as to (a) the persons to receive Awards, (b) the terms and provisions of Awards, (c) whether a Grantee's Employment has been terminated for purposes of the Plan and (d) any adjustments to be made to Awards pursuant to Section 1.6.2 or otherwise.

3.13 Other Payments or Awards

Nothing contained in the Plan shall be deemed in any way to limit or restrict the Firm from making any award or payment to any person under any other plan, arrangement or understanding, whether now existing or hereafter in effect.

3.14 Plan Headings; References to Laws, Rules or Regulations

The headings in this Plan are for the purpose of convenience only, and are not intended to define or limit the construction of the provisions hereof.

Any reference in this Plan to any law, rule or regulation shall be deemed to include any amendments, revisions or successor provisions to such law, rule or regulation.

3.15 Date of Adoption and Term of Plan; Shareholder Approval Required

The adoption of the Plan as amended and restated on February 22, 2018 was expressly conditioned on the approval of the shareholders of GS Inc. in accordance with Treasury Regulation §1.162-27(e)(4), Section 422 of the Code, the rules of the New York Stock Exchange and other applicable law, and such approval was obtained on May 2, 2018. The Plan was further amended and restated effective as of January 15, 2019.

Unless sooner terminated by the Board, the Plan shall terminate on the date of the annual meeting of shareholders of GS Inc. that occurs in 2022. The Board reserves the right to terminate the Plan at any time. All Awards made under the Plan prior to the termination of the Plan shall remain in effect until such Awards have been satisfied or terminated in accordance with the terms and provisions of the Plan and the applicable Award Agreements.

3.16 Governing Law

ALL RIGHTS AND OBLIGATIONS UNDER THE PLAN AND EACH AWARD AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.

3.17 Arbitration

3.17.1 Unless otherwise specified in an applicable Award Agreement, it shall be a condition of each Award that any dispute, controversy or claim between the Firm and a Grantee, arising out of or relating to or concerning the Plan or applicable Award Agreement, shall be finally settled by arbitration in New York City before, and in accordance with the rules then obtaining of, FINRA, or, if FINRA declines to arbitrate the matter in New York City (or if the matter otherwise is not arbitrable by it), the AAA in accordance with the commercial arbitration rules of the AAA. Prior to arbitration, all claims maintained by the Grantee must first be submitted to the Committee in accordance with any claims procedures as may be determined by the Committee. Any arbitration decision and/or award will be final and binding upon the parties and may be entered as a judgment in any appropriate court. Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, such question shall be decided by a court and not an arbitrator.

3.17.2 Unless otherwise specified in an applicable Award Agreement, it shall be a condition of each Award that the Firm and the Grantee irrevocably submit to the exclusive jurisdiction of any state or Federal court located in the City of New York over any suit, action or proceeding arising out of or relating to or concerning the Plan or the Award that is not otherwise arbitrated or resolved according to Section 3.17.1. This includes any suit, action or proceeding to compel arbitration or to enforce an arbitration award. By accepting an Award, the Grantee acknowledges that the forum designated by this Section 3.17.2 has a reasonable relation to the Plan, any applicable Award and to the Grantee's relationship with the Firm. Notwithstanding the foregoing, nothing herein shall preclude the Firm from bringing any suit, action or proceeding in any other court for the purpose of enforcing the provisions of this Section 3.17 or otherwise.

3.17.3 Unless otherwise specified in an applicable Award Agreement, the agreement by the Grantee and the Firm as to forum is independent of the law that may be applied in the suit, action or proceeding and the Grantee and the Firm agree to such forum even if the forum may under applicable law choose to apply non-forum law. By accepting an Award, (a) the Grantee waives, to the fullest extent permitted by applicable law, any objection which the Grantee may have to personal jurisdiction or to the laying of venue of any such suit, action or proceeding in any court referred to in Section 3.17.2, (b) the Grantee undertakes not to commence any action arising out of or relating to or concerning any Award in any forum other than a forum described in Section 3.17 and (c) the Grantee agrees that, to the fullest extent permitted by applicable law, a final and non-appealable judgment in any such suit, action or proceeding in any such court shall be conclusive and binding upon the Grantee and the Firm.

3.17.4 Unless otherwise specified in an applicable Award Agreement, by accepting an Award, the Grantee irrevocably appoints each General Counsel of GS Inc., or any person whom any General Counsel of GS Inc. designates, as his or her agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning this Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1, who shall promptly advise the Grantee of any such service of process.

3.17.5 Unless otherwise specified in an applicable Award Agreement, by accepting an Award, the Grantee agrees to keep confidential the existence of, and any information concerning, a dispute, controversy or claim described in this Section 3.17, except that the Grantee may disclose information concerning such dispute, controversy or claim to the arbitrator or court that is considering such dispute, controversy or claim or to his or her legal counsel (provided that such counsel agrees not to disclose any such information other than as necessary to the prosecution or defense of the dispute, controversy or claim).

3.17.6 By accepting an Award, Grantee agrees to arbitrate all claims as described in this Section 3.17, in accordance with the arbitration procedure set forth in this Section 3.17, provided that nothing herein shall limit any right or obligation under applicable law or Firm policy to provide truthful information to the appropriate judicial, regulatory, administrative, or governmental authority, or preclude a Grantee from filing a charge with or participating in any investigation or proceeding conducted by a governmental authority. Nothing herein shall be construed as an agreement by either the Firm or Grantee to arbitrate claims on a collective or class basis. In addition, by accepting an Award, Grantee agrees that, to the fullest extent permitted by applicable law, no arbitrator shall have the authority to consider class or collective claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

3.17.7 The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and the applicable Award Agreement, and all arbitration proceedings thereunder.

3.17.8 Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of the provisions of the Plan or the applicable Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it shall be decided by a court and not an arbitrator.

3.17.9 Nothing in this Section 3.17 creates a substantive right to bring a claim under U.S., Federal, state or local employment laws.

3.18 Severability; Entire Agreement

If any of the provisions of this Plan or any Award Agreement is finally held to be invalid, illegal or unenforceable (whether in whole or in part), such provision shall be deemed modified to the extent, but only to the extent, of such invalidity, illegality or unenforceability and the remaining provisions shall not be affected thereby; provided that, if any of such provisions is finally held to be invalid, illegal or unenforceable because it exceeds the maximum scope determined to be acceptable to permit such provision to be enforceable, such provision shall be deemed to be modified to the minimum extent necessary to modify such scope in order to make such provision enforceable hereunder. By accepting an Award, the Grantee acknowledges that the Plan and any Award Agreements contain the entire agreement of the parties with respect to the subject matter thereof and supersede all prior agreements, promises, covenants, arrangements, communications, representations and warranties between them, whether written or oral with respect to the subject matter thereof.

3.19 Waiver of Claims

By accepting an Award, the Grantee recognizes and agrees that prior to being selected by the Committee to receive an Award he or she has no right to any benefits under such Award. Accordingly, in consideration of the Grantee's receipt of any Award, he or she expressly waives any right to contest the amount of any Award, the terms of any Award Agreement, any determination, action or omission hereunder or under any Award Agreement by the Committee, the SIP Administrator, GS Inc. or the Board or any amendment to the Plan or any Award Agreement (other than an amendment to this Plan or an Award Agreement to which his or her consent is expressly required by the express terms of an Award Agreement), and the Grantee expressly waives any claim related in any way to any Award including any claim based upon any promissory estoppel or other theory in connection with any Award and the Grantee's employment with the Firm.

3.20 No Third Party Beneficiaries

Except as expressly provided in an Award Agreement, neither the Plan nor any Award Agreement shall confer on any person other than the Firm and the Grantee of the Award any rights or remedies thereunder; provided that the exculpation and indemnification provisions of Section 1.3.5 shall inure to the benefit of a Covered Person's estate, beneficiaries and legatees.

3.21 Certain Limitations on Transactions Involving Common Stock; Fees and Commissions

3.21.1 Each Grantee shall be subject to, and acceptance of an Award shall constitute an agreement to be subject to, the Firm's policies in effect from time to time concerning trading in Common Stock, hedging or pledging and confidential or proprietary information. In addition, with respect to any shares of Common Stock delivered to any Grantee in respect of an Award, sales of such Common Stock shall be effected in accordance such rules and procedures as may be adopted from time to time with respect to sales of such shares of Common Stock (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm).

3.21.2 Each Grantee may be required to pay any brokerage costs or other fees or expenses associated with any Award, including, without limitation, in connection with the sale of any shares of Common Stock delivered in respect of any Award or the exercise of an Option or SAR.

3.22 Deliveries

3.22.1 Deliveries of shares of Common Stock, cash or other property under the Plan shall be made to the Grantee reasonably promptly after the Delivery Date or any other date such delivery is called for, but in no case more than thirty (30) Business Days after such date.

3.22.2 In the discretion of the Committee, delivery of shares of Common Stock (including Restricted Shares) or the payment of cash or other property may be made initially into an escrow account meeting such terms and conditions as are determined by the Firm and may be held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of shares of Common Stock, cash or other property required by this Award Agreement have been satisfied. The Firm may establish and maintain an escrow account on such terms and conditions (which may include, without limitation, the Grantee's (or the Grantee's estate or beneficiary) executing any documents related to, and the Grantee (or the Grantee's estate or beneficiary) paying for any costs associated with, such account) as the Firm may deem necessary or appropriate. Any such escrow arrangement shall, unless otherwise determined by the Firm, provide that (A) the escrow agent shall have the exclusive authority to vote such shares of Common Stock while held in escrow and (B) dividends paid on such shares of Common Stock held in escrow may be accumulated and shall be paid as determined by the Firm in its sole discretion.

3.23 Successors and Assigns of GS Inc.

The terms of this Plan shall be binding upon and inure to the benefit of GS Inc. and its successors and assigns.

Exhibit 10.25

Description of PMD Retiree Medical Program

Participating Managing Directors ("PMDs") who retire with eight or more years of service as PMDs are eligible to receive retiree medical coverage for themselves and their eligible dependents. The PMD retiree medical program currently provides a subsidy of up to 75%. A PMD's eligibility under the PMD retiree medical program generally terminates if the PMD engages in conduct constituting cause or if the PMD goes to work for a competitor. A PMD with less than eight years of service or who goes to work for a non-competitor may be eligible for the retiree medical program but not the subsidy. The PMD retiree medical program and/or the subsidy can be amended or terminated at any time as provided in the applicable plan documents.

THE GOLDMAN SACHS GROUP, INC.
OUTSIDE DIRECTOR _____ RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your _____ award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

1. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

2. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you.

3. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

DELIVERY OF YOUR RSU SHARES

4. **Delivery.** RSU Shares (less applicable withholding) will be delivered in respect of your Outstanding RSUs reasonably promptly (but no more than 30 Business Days) after the Delivery Date, which will be the first Business Day in the third quarter of the Firm's fiscal year that occurs within a Window Period in the year following the year in which you cease to be a director of the Board. Unless otherwise determined by the Committee, delivery of the RSU Shares will be effected by book-entry credit to your Account and no delivery of RSU Shares will be made unless you have timely established your Account. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc.

DIVIDEND EQUIVALENT RIGHTS

5. **Dividend Equivalent Rights.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant.

ACCELERATED DELIVERY

6. **Accelerated Delivery in the Event of Conflicted Employment or Death.** In the event of your Conflicted Employment or death, your Outstanding Award will be treated as described in this Paragraph 6, and all other terms of this Award Agreement continue to apply.

(a) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Unless prohibited by applicable law or regulation, if you accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 7(b)).

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery described in Paragraph 6(a)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(b) Death. If you die, the RSU Shares underlying your Outstanding RSUs will be delivered to the representative of your estate as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

7. Additional Terms, Conditions and Agreements.

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, provided that the Committee may determine not to apply the withholding rate described in Section 3.2.2 of the Plan.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Firm May Affix Legends and Place Stop Orders on RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable. GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(d) You Agree to Certain Consents. By accepting this Award, you have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable.

NON-TRANSFERABILITY

8. **Non-transferability**. Except as otherwise may be provided in this Paragraph 8 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 8 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which you may transfer some or all of your RSUs through a gift for no consideration to any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law, including adoptive relationships, any person sharing the recipient's household (other than a tenant or employee), a trust in which these persons have more than 50% of the beneficial interest, and any other entity in which these persons (or the recipient) own more than 50% of the voting interests.

GOVERNING LAW

9. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

10. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 10 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 10 and the other provisions of this Award Agreement, this Paragraph 10 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 4, 6(b) and 7 and the consents and other items specified in Section 3.3 of the Plan) are satisfied, and will occur by December 31 of the calendar year in which the Delivery Date occurs unless, in order to permit such conditions or restrictions to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date as may be permitted under Section 409A, including Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 7(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 6(b), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) Notwithstanding any provision of Paragraph 5 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(f) The timing of delivery or payment referred to in Paragraph 6(a)(i) will be the earlier of (i) the Delivery Date or (ii) within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, provided that such delivery or payment will be made, and any Committee action referred to in Paragraph 6(a)(i) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(g) Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(h) Delivery of RSU Shares in respect of this Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(i) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

11. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; provided that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and provided further that the Committee expressly reserves the right to accelerate the delivery of the RSU Shares and in its discretion to provide that such Shares may not be transferable until the Delivery Date. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

12. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words “include,” “includes” and “including” will be deemed to be followed by the words “without limitation.” The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

13. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Board" means the Board of Directors of GS Inc.

(e) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(f) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(g) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(h) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award or Shares at Risk would result in an actual or perceived conflict of interest.

(i) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(j) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, provided, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(k) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(l) "Firm" means GS Inc. and its subsidiaries and affiliates.

(m) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(n) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(o) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(p) "RSU Shares" means shares of Common Stock that underlie an RSU.

(q) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(r) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (provided that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
ONE-TIME RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your special one-time award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 15.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you and any applicable Vesting Dates and Delivery Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.** On each Vesting Date listed on your Award Statement, you will become Vested in the amount of Outstanding RSUs listed next to that date. When an RSU becomes Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 12(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

DIVIDENDS

7. **Dividend Equivalent Rights and Dividends.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant.

FORFEITURE OF YOUR AWARD

8. **How You May Forfeit Your Award.** This Paragraph 8 sets forth the events that result in forfeiture of up to all of your RSUs and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend vesting of Outstanding RSUs, payments under Dividend Equivalent Rights or delivery of RSU Shares, (b) deliver any RSU Shares, dividends or payments under Dividend Equivalent Rights into an escrow account in accordance with Paragraph 12(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 8 have occurred. Paragraph 10 (relating to certain circumstances under which you will not forfeit your unvested RSUs upon Employment termination) and Paragraph 11 (relating to certain circumstances under which vesting and/or delivery may be accelerated) provide for exceptions to one or more provisions of this Paragraph 8.

(a) Unvested RSUs Forfeited if Your Employment Terminates. If your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), your rights to your Outstanding RSUs that are not Vested will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(b) Vested and Unvested RSUs Forfeited if You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. If any of the following occurs before the applicable Delivery Date, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm, (D) Solicit any Selected Firm Personnel to apply for or accept employment (or other association) with any person or entity other than the Firm or (E) hire or participate in the hiring of any Selected Firm Personnel by any person or entity other than the Firm (including, without limitation, participating in the identification of individuals for potential hire, and participating in any hiring decision), whether as an employee or consultant or otherwise, or

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status by (A) any entity that you form, that bears your name, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (B) any entity where you have, or will have, direct or indirect managerial responsibility for such Selected Firm Personnel.

(c) Vested and Unvested RSUs Forfeited upon Certain Events. If any of the following occurs your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the .

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the applicable Delivery Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 15 or Section 3.17 of the Plan, or you attempt to arbitrate a dispute without first having exhausted your internal administrative remedies in accordance with Paragraph 12(f)(vii).

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs; *provided*, *however*, that your rights will only be terminated in respect of the RSUs that are replaced, substituted for or otherwise considered by such other entity in making its grant.

(viii) You Receive Compensation that this Award Is Intended to Replace. This Award is intended to replace or substitute for any award or compensation forgone with an entity to which you previously provided services, and such entity nevertheless delivers to you such award or compensation (including any cash, equity or other property (whether vested or unvested)), as determined by the Firm in its sole discretion.

REPAYMENT OF YOUR AWARD

9. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or required to be repaid), in accordance with Section 2.8.3 of the Plan.

(c) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(d) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

EXCEPTIONS TO THE VESTING AND/OR DELIVERY DATES

10. **Circumstances Under Which You Will Not Forfeit Your Unvested RSUs on Employment Termination (but the Original Delivery Date Continues to Apply).** If your Employment terminates at a time when you meet the requirements for Extended Absence[, Retirement,] ["downsizing" or Approved Termination,] [each] as described below, then Paragraph 8(a) will not apply, and your Outstanding RSUs will be treated as described in this Paragraph 10. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) [Extended Absence or Retirement and No Association With a Covered Enterprise.]

(i) Generally. If your Employment terminates by Extended Absence [or Retirement], your Outstanding RSUs that are not Vested will become Vested. **However, your rights to any Outstanding RSU that becomes Vested by this Paragraph 10(a)[(i)] will terminate and no RSU Share will be delivered in respect of that RSU if you Associate With a Covered Enterprise on or before the originally scheduled Vesting Date for that RSU.**

(ii) [Special Treatment for Involuntary or Mutual Agreement Termination. The second sentence of Paragraph 10(a)[(i)] (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" (and, in each case, you have not engaged in conduct constituting Cause) and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement."]

(b) [Downsizing. If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, your Outstanding RSUs that are not yet Vested will become Vested. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.]

(c) [Approved Terminations of Program Analysts and Fixed-Term Employees. If the Firm classifies you as a "program analyst" or a "fixed-term" employee and your Employment terminates solely by reason of an Approved Termination (and you have not engaged in conduct constituting Cause), your Outstanding RSUs that are not yet Vested will become Vested.]

11. **Accelerated Vesting and/or Delivery in the Event of a Qualifying Termination After a Change in Control[, Conflicted Employment] or Death.** In the event of your Qualifying Termination After a Change in Control[, Conflicted Employment] or death, each as described below, then Paragraph 8(a) will not apply, your Outstanding RSUs will be treated as described in this Paragraph 11, and, except as set forth in Paragraph 11(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered. In addition, the forfeiture events in Paragraph 8 will not apply to your Award.

(b) [You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Notwithstanding anything to the contrary in the Plan or otherwise, for purposes of this Award Agreement, "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs would result in an actual or perceived conflict of interest. Unless prohibited by applicable law or regulation, the following will apply as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment.

(A) Vesting. If your Employment terminates solely because you resign to accept Conflicted Employment and you have completed at least three years of continuous service with the Firm, your Outstanding RSUs will Vest; otherwise, you will forfeit any Outstanding RSUs that are not Vested in accordance with Paragraph 8(a).

(B) Delivery. If your Employment terminates solely because you resign to accept Conflicted Employment or if, following your termination of Employment, you notify the Firm that you are accepting Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding Vested RSUs (including in the form of cash as described in Paragraph 12(b)).

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated vesting and/or delivery described in Paragraph 11(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).]

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered to the representative of your estate as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

12. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding amounts from any payment or distribution to you. In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant, Vesting or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In no event, however, does this Paragraph 12(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSUs that become Vested on a Vesting Date and RSU Shares that become deliverable on a Delivery Date may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when RSU Shares are delivered to you and you receive payment in respect of Dividend Equivalent Rights;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares or the payment of cash (including dividends and payments under Dividend Equivalent Rights) or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 8(c)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and subject previously delivered amounts to repayment under Paragraph 8(c)(iv);

(vii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 15 and Section 3.17 of the Plan; and

(viii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

13. **Non-transferability.** Except as otherwise may be provided in this Paragraph 13 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 13 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of RSUs may transfer some or all of their RSUs through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

14. **Right of Offset.** Except as provided in Paragraph 17(h), the obligation to deliver RSU Shares or to make payments under Dividend Equivalent Rights under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

15. **Arbitration; Choice of Forum.**

(a) **BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.**

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 12(f)(vii).

16. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

17. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 17 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 17 and the other provisions of this Award Agreement, this Paragraph 17 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 10[(a)(ii), 10](b), 11([b][c]) and 12 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 12([b][c]) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 11([b][c]), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 11(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 11(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 7 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(g) [The timing of delivery or payment referred to in Paragraph 11(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 11(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.]

(h) Paragraph 14 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

COMMITTEE AUTHORITY, AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

18. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply and to limit the forfeitures and repayments that result under Paragraphs 8 and 9. In addition, the Committee, in its sole discretion, may determine whether Paragraph[s] [10(a)(ii)] [and] [10(b)] will apply upon a termination of Employment[and whether a termination of Employment constitutes an Approved Termination under Paragraph 10(c)].

19. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

20. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

21. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement (including the forfeiture and repayment provisions in Paragraphs 8 and 9) or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) ["Approved Termination" means that you are classified by the Firm as a "program analyst" or "fixed-term employee" and you (i) successfully complete the analyst program or fixed-term engagement, as applicable and determined by the Firm in its sole discretion, including remaining Employed through the completion date specified by the Firm, and (ii) terminate Employment immediately after the completion date without any "stay-on" or other agreement or understanding to continue Employment with the Firm. If you agree to stay with the Firm as an employee after your analyst program or fixed-term engagement ends and then later terminate Employment, you will not have an Approved Termination.]

(c) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(d) ["Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs would result in an actual or perceived conflict of interest.]

(e) "Covered Enterprise" means a Competitive Enterprise and any other existing or planned business enterprise that: (i) offers, holds itself out as offering or reasonably may be expected to offer products or services that are the same as or similar to those offered by the Firm or that the Firm reasonably expects to offer ("Firm Products or Services") or (ii) engages in, holds itself out as engaging in or reasonably may be expected to engage in any other activity that is the same as or similar to any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage ("Firm Activities"). For the avoidance of doubt, Firm Activities include any activity that requires the same or similar skills as any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage, irrespective of whether any such financial activity is in furtherance of an advisory, agency, proprietary or fiduciary undertaking.

The enterprises covered by this definition include enterprises that offer, hold themselves out as offering or reasonably may be expected to offer Firm Products or Services, or engage in, hold themselves out as engaging in or reasonably may be expected to engage in Firm Activities directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by or by being under common ownership with an enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services or that engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities). The definition of Covered Enterprise includes,

solely by way of example, any enterprise that offers, holds itself out as offering or reasonably may be expected to offer any product or service, or engages in, holds itself out as engaging in or reasonably may be expected to engage in any activity, in any case, associated with investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than you or your family members (including, for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading. An enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services, or engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities is a Covered Enterprise**, irrespective of whether the enterprise is a customer, client or counterparty of the Firm or is otherwise associated with the Firm and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(f) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(g) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(h) "SEC" means the U.S. Securities and Exchange Commission.

(i) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 8(b) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of

the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(i) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(j) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(k) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity; (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in any entity that engages in any activity or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably be expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation: financial services such as investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than the Grantee and members of the Grantee's family (including for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) ["Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).]

(x) "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(y) "RSU Shares" means shares of Common Stock that underlie an RSU.

(z) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(aa) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(bb) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(cc) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(dd) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ee) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(ff) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(gg) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
YEAR-END RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your year-end award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 16.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you and any applicable Vesting Dates, Delivery Dates and Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.** On each Vesting Date listed on your Award Statement, you will become Vested in the amount of Outstanding RSUs listed next to that date. When an RSU becomes Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 13(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.** Fifty percent of the RSU Shares that are delivered on any date, **before** tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk. This means that if, for example, on a Delivery Date, you are scheduled to receive delivery of 1,000 RSU Shares, and you are subject to a 40% withholding rate, then (a) 400 RSU Shares will be withheld for taxes, (b) 500 RSU Shares delivered to you will be Shares at Risk and (c) 100 RSU Shares delivered to you will not be subject to Transfer Restrictions. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

8. **Dividend Equivalent Rights and Dividends.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant. In addition, you will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk.

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend vesting of Outstanding RSUs, payments under Dividend Equivalent Rights, delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares, dividends or payments under Dividend Equivalent Rights into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 9 have occurred. Paragraph 11 (relating to certain circumstances under which you will not forfeit your unvested RSUs upon Employment termination) and Paragraph 12 (relating to certain circumstances under which vesting, delivery and/or release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 9.

(a) Unvested RSUs Forfeited if Your Employment Terminates. If your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), your rights to your Outstanding RSUs that are not Vested will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(b) Vested and Unvested RSUs Forfeited if You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. If any of the following occurs before the applicable Delivery Date, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm, (D) Solicit any Selected Firm Personnel to apply for or accept employment (or other association) with any person or entity other than the Firm or (E) hire or participate in the hiring of any Selected Firm Personnel by any person or entity other than the Firm (including, without limitation, participating in the identification of individuals for potential hire, and participating in any hiring decision), whether as an employee or consultant or otherwise, or

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status by (A) any entity that you form, that bears your name, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (B) any entity where you have, or will have, direct or indirect managerial responsibility for such Selected Firm Personnel.

(c) [Vested and Unvested RSUs Forfeited Upon Certain Events. If any of the following occurs before the applicable Delivery Date, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) GS Inc. Fails to Maintain the Minimum Tier 1 Capital Ratio. GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.

(ii) GS Inc. Is Determined to Be in Default. The Board of Governors of the Federal Reserve or the Federal Deposit Insurance Corporation (the "FDIC") makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."]

(d) Vested and Unvested RSUs and Shares at Risk Forfeited upon Certain Events. If any of the following occurs (i) your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs and (ii) your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's ____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the applicable Delivery Date for RSUs or the Transferability Date for Shares at Risk.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date for RSUs or the Transferability Date for Shares at Risk, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 16 or Section 3.17 of the Plan, or you attempt to arbitrate a dispute without first having exhausted your internal administrative remedies in accordance with Paragraph 13(f)(viii).

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs or Shares at Risk; *provided*, *however*, that your rights will only be terminated in respect of the RSUs and Shares at Risk that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares (which, for the avoidance of doubt, includes any Shares at Risk) for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any Shares at Risk for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(c) Any RSU Shares that were delivered (but not subject to Transfer Restrictions) at the same time any Shares at Risk that are cancelled or required to be repaid were delivered.

(d) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or required to be repaid), in accordance with Section 2.8.3 of the Plan.

(e) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(f) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

EXCEPTIONS TO THE VESTING, DELIVERY AND/OR TRANSFERABILITY DATES

11. **Circumstances Under Which You Will Not Forfeit Your Unvested RSUs on Employment Termination (but the Original Delivery Date and Transferability Date Continue to Apply).** If your Employment terminates at a time when you meet the requirements for Extended Absence, Retirement[,][or] "downsizing" [or Approved Termination], each as described below, then Paragraph 9(a) will not apply, and your Outstanding RSUs will be treated as described in this Paragraph 11. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) Extended Absence or Retirement and No Association With a Covered Enterprise.

(i) Generally. If your Employment terminates by Extended Absence or Retirement, your Outstanding RSUs that are not Vested will become Vested. **However, your rights to any Outstanding RSU that becomes Vested by this Paragraph 11(a)(i) will terminate and no RSU Share will be delivered in respect of that RSU if you Associate With a Covered Enterprise on or before the originally scheduled Vesting Date for that RSU**.

(ii) Special Treatment for Involuntary or Mutual Agreement Termination. The second sentence of Paragraph 11(a)(i) (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" (and, in each case, you have not engaged in conduct constituting Cause) and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement."

(b) Downsizing. If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, your Outstanding RSUs that are not yet Vested will become Vested. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.

(c) [Approved Terminations of Program Analysts and Fixed-Term Employees. If the Firm classifies you as a "program analyst" or a "fixed-term" employee and your Employment terminates solely by reason of an Approved Termination (and you have not engaged in conduct constituting Cause), your Outstanding RSUs that are not yet Vested will become Vested.]

12. **Accelerated Vesting, Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each

as described below, then Paragraph 9(a) will not apply, your Outstanding RSUs and Shares at Risk will be treated as described in this Paragraph 12, and, except as set forth in Paragraph 12(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered, and any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 9 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Notwithstanding anything to the contrary in the Plan or otherwise, for purposes of this Award Agreement, "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest. Unless prohibited by applicable law or regulation, the following will apply as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment.

(A) Vesting. If your Employment terminates solely because you resign to accept Conflicted Employment and you have completed at least three years of continuous service with the Firm, your Outstanding RSUs will Vest; otherwise, you will forfeit any Outstanding RSUs that are not Vested in accordance with Paragraph 9(a).

(B) Delivery and Release of Transfer Restrictions. If your Employment terminates solely because you resign to accept Conflicted Employment or if, following your termination of Employment, you notify the Firm that you are accepting Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding Vested RSUs (including in the form of cash as described in Paragraph 13(b)) and any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated vesting, delivery and/or release of Transfer Restrictions described in Paragraph 12(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

13. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding amounts from any payment or distribution to you. In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant, Vesting or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In no event, however, does this Paragraph 13(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSUs that become Vested on a Vesting Date, RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS

Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when RSU Shares are delivered to you, you receive payment in respect of Dividend Equivalent Rights and you request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash (including dividends and payments under Dividend Equivalent Rights) or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs or Shares at Risk, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 9[(c)][(d)](iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and Shares at Risk and subject previously delivered amounts to repayment under Paragraph 9[(c)][(d)](iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Shares at Risk and Sell, Assign or Transfer Any Forfeited Shares at Risk. You are granting to the Firm the full power and authority to register any Shares at Risk in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Shares at Risk if you forfeit your Shares at Risk;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 16 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

14. **Non-transferability.** Except as otherwise may be provided in this Paragraph 14 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 14 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of RSUs may transfer some or all of their RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

15. **Right of Offset.** Except as provided in Paragraph 18(h), the obligation to deliver RSU Shares, to pay dividends or payments under Dividend Equivalent Rights or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

16. **Arbitration; Choice of Forum.**

(a) **BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.**

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 13(f)(viii).

17. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

18. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 18 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 18 and the other provisions of this Award Agreement, this Paragraph 18 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 11(a)(ii), 11(b), 12(c) and 13 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 13(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 12(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 12(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 12(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(g) The timing of delivery or payment referred to in Paragraph 12(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 12(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 15 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

COMMITTEE AUTHORITY, AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

19. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 9 and 10 and to remove Transfer Restrictions before the Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraphs 11(a)(ii) and 11(b) will apply upon a termination of Employment [and whether a termination of Employment constitutes an Approved Termination under Paragraph 11(c)].

20. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

21. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words “include,” “includes” and “including” will be deemed to be followed by the words “without limitation.” The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

22. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement (including the forfeiture and repayment provisions in Paragraphs 9 and 10) or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) ["Approved Termination" means that you are classified by the Firm as a "program analyst" or "fixed-term employee" and you (i) successfully complete the analyst program or fixed-term engagement, as applicable and determined by the Firm in its sole discretion, including remaining Employed through the completion date specified by the Firm, and (ii) terminate Employment immediately after the completion date without any "stay-on" or other agreement or understanding to continue Employment with the Firm. If you agree to stay with the Firm as an employee after your analyst program or fixed-term engagement ends and then later terminate Employment, you will not have an Approved Termination.]

(c) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(d) "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest.

(e) "Covered Enterprise" means a Competitive Enterprise and any other existing or planned business enterprise that: (i) offers, holds itself out as offering or reasonably may be expected to offer products or services that are the same as or similar to those offered by the Firm or that the Firm reasonably expects to offer ("Firm Products or Services") or (ii) engages in, holds itself out as engaging in or reasonably may be expected to engage in any other activity that is the same as or similar to any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage ("Firm Activities"). For the avoidance of doubt, Firm Activities include any activity that requires the same or similar skills as any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage, irrespective of whether any such financial activity is in furtherance of an advisory, agency, proprietary or fiduciary undertaking.

The enterprises covered by this definition include enterprises that offer, hold themselves out as offering or reasonably may be expected to offer Firm Products or Services, or engage in, hold themselves out as engaging in or reasonably may be expected to engage in Firm Activities directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by or by being under common ownership with an enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services or that engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities). The definition of Covered Enterprise includes, solely by way of example, any enterprise that offers, holds itself out as offering or reasonably may be expected to offer any product or

service, or engages in, holds itself out as engaging in or reasonably may be expected to engage in any activity, in any case, associated with investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than you or your family members (including, for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading. An enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services, or engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities is a Covered Enterprise**, irrespective of whether the enterprise is a customer, client or counterparty of the Firm or is otherwise associated with the Firm and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(f) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(g) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(h) "SEC" means the U.S. Securities and Exchange Commission.

(i) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9(b) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(j) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares

into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(i) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(j) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(k) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity; (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in any entity that engages in any activity or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably be expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation: financial services such as investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than the Grantee and members of the Grantee's family (including for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

(x) "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(y) "RSU Shares" means shares of Common Stock that underlie an RSU.

(z) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(aa) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(bb) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(cc) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(dd) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ee) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(ff) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(gg) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(hh) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
____ YEAR-END RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your year-end award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 17.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you and any applicable Delivery Dates and Transferability Dates. [The portion of your RSUs that are designated on the Award Statement as " Year-End Base RSUs" are referred to in this Award Agreement as "Base RSUs." The portion of your RSUs that are designated on the Award Statement as " Year-End Additional Base RSUs" are referred to in this Award Agreement as "Additional Base RSUs." All references to RSUs in this Award Agreement include both the Base RSUs and the Additional Base RSUs.]

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.** All of your RSUs are Vested. When an RSU is Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares**.

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 14(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.**

(a) [percent of the RSU Shares that are delivered on any date, before tax withholding (or, if the applicable tax withholding rate is greater than %, all RSU Shares delivered after tax withholding), will be Shares at Risk. [This means that if, for example, on a Delivery Date, you are scheduled to receive delivery of]. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.]

(b) [[Base RSUs with a Delivery Date on or before . For Base RSUs with a Delivery Date on or before , 50% of the RSU Shares that are delivered on any date in respect of Base RSUs, **before** tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk that are subject to Transfer Restrictions until the January Transferability Date, as set forth on your Award Statement. If the tax withholding rate is less than 50%, then any remaining RSU Shares that are delivered after tax withholding will be Shares at Risk subject to Transfer Restrictions until the -Month Transferability Date.]

(c) [Base RSUs with a Delivery Date in [or after] For Base RSUs with a Delivery Date in [or after] , all RSU Shares delivered after tax withholding will be Shares at Risk subject to Transfer Restrictions until the -Month Transferability Date.]

(d) [Additional Base RSUs. For Additional Base RSUs, all RSU Shares delivered after tax withholding will be Shares at Risk subject to Transfer Restrictions until the -Month Transferability Date.]

(e) Example.

(i) [ ].

(ii) [ ].

(f) [Purported Transactions that Violate the Transfer Restrictions Are Void.] Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void.

(g) [Removal of Transfer Restrictions.] Within 30 Business Days after the [applicable] Transferability Date [listed on your Award Statement] (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date [listed on your Award Statement], and all such dates will be treated as a single Transferability Date for purposes of this Award.]

DIVIDENDS

8. **[Dividend Equivalent Rights and] Dividends.** [Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant. In addition,] [y][Y]ou will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk. [The RSUs do **not** include Dividend Equivalent Rights.]

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend [payments under Dividend Equivalent Rights,] delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares [or][,] dividends [or payments under Dividend Equivalent Rights] into an escrow account in accordance with Paragraph 14(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 9 have occurred. Paragraph 12 (relating to certain circumstances under which restrictions on Association With a Covered Enterprise will not apply) and Paragraph 13 (relating to certain circumstances under which delivery and/or release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 9. [The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 9 and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm as described in Paragraph 10 and the Appendix.]

(a) RSUs Forfeited Upon Certain Events. If any of the following occurs, your rights to your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs, as may be further described below:

(i) You Associate With a Covered Enterprise.

(A) If you Associate With a Covered Enterprise before the earlier of or a Qualifying Termination After a Change in Control, your rights to all your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(B) [If you Associate With a Covered Enterprise on or after but before the earlier of or a Qualifying Termination After a Change in Control, your rights to your Outstanding RSUs that are scheduled to deliver in [, , and] will terminate, and no RSU Shares will be delivered in respect of such RSUs.]

(ii) You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. Before the applicable Delivery Date, either:

(A) you, in any manner, directly or indirectly, (1) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (2) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (3) Solicit any person who is an employee of the Firm to resign from the Firm, (4) Solicit any Selected Firm Personnel to apply for or accept employment (or other association) with any person or entity other than the Firm or (5) hire or participate in the hiring of any Selected Firm Personnel by any person or entity other than the Firm (including, without limitation, participating in the identification of individuals for potential hire, and participating in any hiring decision), whether as an employee or consultant or otherwise, or

(B) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status by (1) any entity that you form, that bears your name, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (2) any entity where you have, or will have, direct or indirect managerial responsibility for such Selected Firm Personnel.

(iii) [GS Inc. Fails to Maintain the Minimum Tier 1 Capital Ratio. Before the applicable Delivery Date, GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.]

(iv) [GS Inc. Is Determined to Be in Default. Before the applicable Delivery Date, the Board of Governors of the Federal Reserve or the Federal Deposit Insurance Corporation (the "FDIC") makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."]

(b) RSUs and Shares at Risk Forfeited upon Certain Events. If any of the following occurs (i) your rights to all of your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs and (ii) your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause [(including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix)] has occurred before the applicable Delivery Date for RSUs or the applicable Transferability Date for Shares at Risk.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date for RSUs or the [applicable] Transferability Date for Shares at Risk, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 17 or Section 3.17 of the Plan, or you attempt to arbitrate a dispute without first having exhausted your internal administrative remedies in accordance with Paragraph 14(f)(viii).

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs or Shares at Risk; *provided*, *however*, that your rights will only be terminated in respect of the RSUs and Shares at Risk that are replaced, substituted for or otherwise considered by such other entity in making its grant.

(viii) [Accounting Restatement Required Under Sarbanes-Oxley. GS Inc. is required to prepare an accounting restatement due to GS Inc.'s material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws as described in Section 304(a) of Sarbanes-Oxley; *provided*, *however*, that your rights will only be terminated in respect of the RSUs and Shares at Risk to the same extent that would be required under Section 304(a) of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).]

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.**

(a) [Repayment, Generally]. If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(i) Any RSU Shares (which, for the avoidance of doubt, includes any Shares at Risk) for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(ii) Any Shares at Risk for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(iii) Any RSU Shares that were delivered (but not subject to Transfer Restrictions) at the same time any Shares at Risk that are cancelled or required to be repaid were delivered.

(iv) [Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or required to be repaid), in accordance with Section 2.8.3 of the Plan.]

(v) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(vi) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares[and][,] dividend payments [and payments under Dividend Equivalent Rights] that are forfeited or required to be repaid.

(b) [Repayment Upon Accounting Restatement Required Under Sarbanes-Oxley. If an event described in Paragraph 9(b)(viii) (relating to a requirement under Sarbanes-Oxley that GS Inc. prepare an accounting restatement) occurs, any RSU Shares, cash or other property delivered, paid or withheld in respect of this Award will be subject to repayment as described in Paragraph 10(a) to the same extent that would be required under Section 304(a) of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).]

[ADDITIONAL FORFEITURE FOR CERTAIN INVESTIGATIONS

11. Additional Forfeitures.

(a) Forfeiture of RSUs and Shares at Risk. In addition to and without limiting the Firm's rights under the forfeiture and repayment provisions set forth in Paragraphs 9 and 10, if the Committee determines that the number of RSUs subject to this Award would have been impacted by the results of the investigation relating to 1Malaysia Development Berhad ("1MDB"), the Committee may: (i) terminate your rights to such number of RSUs subject to this Award; and (ii) if and to the extent you receive delivery of Shares at Risk in connection with any RSUs subject to this Award, cause such number of your Shares at Risk to be cancelled, in either case as it determines in its sole discretion to be appropriate in light of the results of the 1MDB investigation, and your rights with respect to the number of such RSUs and Shares at Risk will terminate (and in the case of RSUs, no Shares at Risk will be delivered in respect thereof).

(b) Suspension and Escrow. In addition, the Firm reserves the right to: (i) suspend delivery of RSU Shares [and payments under Dividend Equivalent Rights] prior to the Delivery Date or release of Transfer Restrictions prior to the Transferability Date; or (ii) deliver any RSU Shares[, or] dividends [and payments under Dividend Equivalent Rights] into an escrow account in accordance with Paragraph 14(f)(v) until the Committee determines whether the termination of your rights to any RSUs or Shares at Risk in accordance with Paragraph 11(a) is appropriate.

(c) Repayment of Tax Withholding. If any Shares at Risk are cancelled in accordance with Paragraph 11(a), you will be obligated immediately upon demand therefor to pay the Firm an amount equal to any withholding taxes in respect of such Shares at Risk.]

EXCEPTIONS TO ASSOCIATION WITH A COVERED ENTERPRISE, DELIVERY DATES AND/OR TRANSFERABILITY DATES

12. **Restrictions on Association With a Covered Enterprise Cease to Apply After an Involuntary or Mutual Agreement Termination (but the Original Delivery Date and Transferability Date Continue to Apply).** Paragraph 9(a)(i) (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (a) your Employment terminates and the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" (and, in each case, you have not engaged in conduct constituting Cause) and (b) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement." All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9, 10 and 11, continue to apply.

13. **Accelerated Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding RSUs and Shares at Risk will be treated as described in this Paragraph 13, and, except as set forth in Paragraph 13 (a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9, 10 and 11, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs will be delivered, and any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 9 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Notwithstanding anything to the contrary in the Plan or otherwise, for purposes of this Award Agreement, "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest. Unless prohibited by applicable law or regulation, if your Employment terminates solely because you resign to accept Conflicted Employment or if, following your termination of Employment, you notify the Firm that you are accepting Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 14(b)) and any Transfer Restrictions will cease to apply as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery and/or release of Transfer Restrictions described in Paragraph 13(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

14. Additional Terms, Conditions and Agreements.

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding amounts from any payment or distribution to you. In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In no event, however, does this Paragraph 14(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when RSU Shares are delivered to you [, you receive payment in respect of Dividend Equivalent Rights] and you request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash (including dividends) [and payments under Dividend Equivalent Rights]) or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs or Shares at Risk, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 9(b)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and Shares at Risk and subject previously delivered amounts to repayment under Paragraph 9(b)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Shares at Risk and Sell, Assign or Transfer Any Forfeited Shares at Risk. You are granting to the Firm the full power and authority to register any Shares at Risk in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Shares at Risk if you forfeit your Shares at Risk;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 17 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

15. **Non-transferability.** Except as otherwise may be provided in this Paragraph 15 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 15 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of RSUs may transfer some or all of their RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the [applicable] Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

16. **Right of Offset.** Except as provided in Paragraph 19[(g)][(h)], the obligation to deliver RSU Shares, to pay dividends [or payments under Dividend Equivalent Rights] or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

17. **Arbitration; Choice of Forum.**

(a) **BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.**

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 14(f)(viii).

18. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

19. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 19 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 19 and the other provisions of this Award Agreement, this Paragraph 19 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 12, 13(c) and 14 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay

delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 14(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 13(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 13(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 13(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) [Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.]

(g) The timing of delivery or payment referred to in Paragraph 13(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 13(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 16 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

COMMITTEE AUTHORITY, AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

20. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 9, 10 and 11 and to remove Transfer Restrictions before the [applicable] Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraph 12 will apply upon a termination of Employment.

21. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

22. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

23. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement (including the forfeiture and repayment provisions in Paragraphs 9, 10 and 11) or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

[CODE STAFF FORFEITURE AND REPAYMENT APPENDIX

This Code Staff Appendix supplements Paragraph[s] 9 [and 11(a)] and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph[s] 10 [and 11(c)]. As with the events described in Paragraph[s] 9 [and 11(a)], more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares or dividends into an escrow account in accordance with Paragraph 14(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs (b) through (e) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Loss Event" (as defined below) or "Risk Event" (as defined below) and the extent to which: (1) you participated in the Loss Event or Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Loss Event, Risk Event, your "Serious Misconduct" (as defined below) or the Serious Misconduct of a "Supervised Employee" (as defined below) and (3) your compensation may be adjusted for the year in which the Loss Event, Risk Event, your Serious Misconduct or a Supervised Employee's Serious Misconduct is discovered.

(a) You Associate With a Material Covered Enterprise Prior to . If you "Associate With a Material Covered Enterprise" (as defined below) on or after the date the restrictions on Association With a Covered Enterprise lapse (as described in Paragraph 9(a)(i) of the Award Agreement) and before the earlier of or a Qualifying Termination After a Change In Control, your rights to all of your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs and your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled.

(i) "**Associate With a Material Covered Enterprise**" means that you (A) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any "Material Covered Enterprise" (as defined below) or (B) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Material Covered Enterprise. Associate With a Material Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (A) becoming the subject of any publicly available announcement or report of a pending or future association with a Material Covered Enterprise and (B) unpaid associations, including an association in contemplation of future employment. The term "Association With a Material Covered Enterprise" has its correlative meaning.

(ii) The restriction described above on any Association With a Material Covered Enterprise will not apply if the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" (and, in each case, you have not engaged in conduct constituting Cause) and you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes.

(iii) "**Material Covered Enterprise**" means a Covered Enterprise that the Firm determines, in its sole discretion, to be material.

(b) A Loss Event Occurs Prior to Delivery. If a Loss Event occurs prior to the delivery of RSU Shares, your rights in respect of all or a portion of your RSUs which are scheduled to deliver on the next Delivery Date immediately following the date that the Loss Event is identified (or, if not practicable, then the next following Delivery Date) will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(i) A "**Loss Event**" means (A) an annual pre-tax loss at GS Inc. or (B) annual negative revenues in one or more reporting segments as disclosed in the Firm's Form 10-K other than the Investing & Lending segment, or annual negative revenues in the Investing & Lending segment of $5 billion or more, *provided* in either case that you are employed in a business within such reporting segment.

(c) A Risk Event Occurs Prior to . If a Risk Event occurs prior to , (i) your rights in respect of all or a portion of your RSUs will terminate and no RSU Shares will be delivered in respect of such RSUs, (ii) your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled and (iii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(d) You Engage in Serious Misconduct Prior to . If you engage in Serious Misconduct during the period beginning on the [applicable] Transferability Date through , you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

(e) A Supervised Employee Engages in Serious Misconduct. If the Committee determines that it is appropriate to hold you accountable in whole or in part for Serious Misconduct related to compliance, control or risk that occurred during the Firm's fiscal year by a Supervised Employee, your rights in respect of all or a portion of your RSUs will terminate and no RSU Shares will be delivered in respect of such RSUs and your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled.

(i) "**Supervised Employee**" means an individual with respect to whom the Committee determines you had supervisory responsibility as a result of direct or indirect reporting lines or your management responsibility for an office, division or business.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs (c) and (d) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 17 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount).]

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(c) "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest.

(d) "Covered Enterprise" means a Competitive Enterprise and any other existing or planned business enterprise that: (i) offers, holds itself out as offering or reasonably may be expected to offer products or services that are the same as or similar to those offered by the Firm or that the Firm reasonably expects to offer ("Firm Products or Services") or (ii) engages in, holds itself out as engaging in or reasonably may be expected to engage in any other activity that is the same as or similar to any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage ("Firm Activities"). For the avoidance of doubt, Firm Activities include any activity that requires the same or similar skills as any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage, irrespective of whether any such financial activity is in furtherance of an advisory, agency, proprietary or fiduciary undertaking.

The enterprises covered by this definition include enterprises that offer, hold themselves out as offering or reasonably may be expected to offer Firm Products or Services, or engage in, hold themselves out as engaging in or reasonably may be expected to engage in Firm Activities directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by or by being under common ownership with an enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services or that engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities). The definition of Covered Enterprise includes, solely by way of example, any enterprise that offers, holds itself out as offering or reasonably may be expected to offer any product or service, or engages in, holds itself out as engaging in or reasonably may be expected to engage in any activity, in any case, associated with investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than you or your family members (including, for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading.

An enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services, or engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities is a Covered Enterprise**, irrespective of whether the enterprise is a customer, client or counterparty of the Firm or is otherwise associated with the Firm and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(e) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(f) ["January Transferability Date" means the first trading day in a Window Period that occurs in January , or if no Window Period occurs in January , the first trading day of the first Window Period following thereafter.]

(g) [" -Month Transferability Date" means the first trading day in a Window Period that occurs on or after the -month anniversary of the Delivery Date.]

(h) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(i) "Sarbanes-Oxley" means the Sarbanes-Oxley Act of 2002, as amended.

(j) "SEC" means the U.S. Securities and Exchange Commission.

(k) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9(a)(ii) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(l) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Board" means the Board of Directors of GS Inc.

(e) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(f) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(g) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election

of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(h) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(i) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(j) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(k) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(l) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity; (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in any entity that engages in any activity or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably be expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation: financial services such as investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than the Grantee and members of the Grantee's family (including for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading.

(m) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(n) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(o) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(p) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(q) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(r) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(s) "Firm" means GS Inc. and its subsidiaries and affiliates.

(t) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(u) "Grantee" means a person who receives an Award.

(v) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(w) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(x) "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(y) "RSU Shares" means shares of Common Stock that underlie an RSU.

(z) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(aa) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(bb) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(cc) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(dd) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ee) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(ff) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(gg) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
____ YEAR-END RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your ____ year-end award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 16.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the type and number of RSUs awarded to you and any applicable Vesting Dates, Delivery Dates and Transferability Dates. [The portion of your RSUs that are designated on the Award Statement as "_____ Year-End Base RSUs" are referred to in this Award Agreement as "Base RSUs." The portion of your RSUs that are designated on the Award Statement as "_____ Year-End Additional Base RSUs" are referred to in this Award Agreement as "Additional Base RSUs." The portion of your RSUs that are designated on the Award Statement as "_____ Year-End Supplemental RSUs" are referred to in this Award Agreement as "Supplemental RSUs." All references to RSUs in this Award Agreement include the Base RSUs, the Additional Base RSUs and the Supplemental RSUs.] [This Award Agreement does not govern the terms and conditions of any RSUs designated on your Award Statement as "Short-Term RSUs," which, if applicable to you, are addressed in a separate Award Agreement.]

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.**

(a) Base RSUs[and Additional Base RSUs]. On each Vesting Date listed on your Award Statement, you will become Vested in the amount of Outstanding Base RSUs and Outstanding Additional Base RSUs listed next to that date.

(b) [Supplemental RSUs. All of your Supplemental RSUs are Vested.]

(c) What Vesting Means. When an RSU becomes Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares**.

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 13(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date [*provided* that such delivery applies first to RSU Shares underlying the Supplemental RSUs and then to RSU Shares underlying the Base RSUs]. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.**

(a) Base and Additional Base RSUs.

(i) Base RSUs with a Delivery Date in or before _____. [For Base RSUs with a Delivery Date in or before _____,] fifty percent of the RSU Shares that are delivered on any date in respect of Base RSUs, **before** tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk that are subject to Transfer Restrictions until the January __ Transferability Date, as set forth on your Award Statement. If the tax withholding rate is less than 50%, then any remaining RSU Shares that are delivered in respect of Base RSUs after tax withholding will be Shares at Risk subject to Transfer Restrictions until the _____-Month Transferability Date.

(ii) [Base RSUs with a Delivery Date in or after _____.For Base RSUs with a Delivery Date in _____, all RSU Shares delivered after tax withholding will be Shares at Risk subject to Transfer Restrictions until the _____-Month Transferability Date.]

(iii) [Additional Base RSUs. For Additional Base RSUs, all RSU Shares delivered after tax withholding will be Shares at Risk subject to Transfer Restrictions until the _____-Month Transferability Date.]

(b) [Supplemental RSUs. For Supplemental RSUs, all RSU Shares delivered after tax withholding will be Shares at Risk subject to Transfer Restrictions until the _____-Month Transferability Date.]

(c) [Example.]

(d) Purported Transactions that Violate the Transfer Restrictions Are Void. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void.

(e) Removal of Transfer Restrictions. Within 30 Business Days after the applicable Transferability Date (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

8. **[Dividend Equivalent Rights and] Dividends.** [Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant. In addition,] you will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk. [The RSUs do **not** include Dividend Equivalent Rights.]

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend vesting of Outstanding RSUs, [payments under Dividend Equivalent Rights,] delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares[,] [or] dividends [or payments under Dividend Equivalent Rights] into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 9 have occurred. Paragraph 11 (relating to certain circumstances under which you will not forfeit your unvested RSUs upon Employment termination) and Paragraph 12 (relating to certain circumstances under which vesting, delivery and/or release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 9. [The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 9 and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm as described in Paragraph 10 and the Appendix.]

(a) Unvested RSUs Forfeited if Your Employment Terminates. If your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), your rights to your Outstanding RSUs that are not Vested will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(b) [Supplemental RSUs Forfeited if You Associate With a Covered Enterprise. Your rights to your Outstanding Supplemental RSUs that are scheduled to deliver on an applicable Delivery Date will terminate, and no RSU Shares will be delivered in respect of such Supplemental RSUs if you Associate With a Covered Enterprise before the earlier of the January 1 immediately preceding that Delivery Date or a Qualifying Termination After a Change In Control.]

(c) Vested and Unvested RSUs Forfeited Upon Certain Events. If any of the following occurs before the applicable Delivery Date, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. Either:

(A) you, in any manner, directly or indirectly, (1) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (2) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (3) Solicit any person who is an employee of the Firm to resign from the Firm, (4) Solicit any Selected Firm Personnel to apply for or accept employment (or other association) with any person or entity other than the Firm or (5) hire or participate in the hiring of any Selected Firm Personnel by any person or entity other than the Firm (including, without limitation, participating in the identification of individuals for potential hire, and participating in any hiring decision), whether as an employee or consultant or otherwise, or

(B) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status by (1) any entity that you form, that bears your name, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (2) any entity where you have, or will have, direct or indirect managerial responsibility for such Selected Firm Personnel.

(ii) GS Inc. Fails to Maintain the Minimum Tier 1 Capital Ratio. GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.

(iii) GS Inc. Is Determined to Be in Default. The Board of Governors of the Federal Reserve or the Federal Deposit Insurance Corporation (the "FDIC") makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."

(d) Vested and Unvested RSUs and Shares at Risk Forfeited upon Certain Events. If any of the following occurs (i) your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs and (ii) your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause [(including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix)] has occurred before the applicable Delivery Date for RSUs or the applicable Transferability Date for Shares at Risk.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date for RSUs or the applicable Transferability Date for Shares at Risk, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 16 or Section 3.17 of the Plan, or you attempt to arbitrate a dispute without first having exhausted your internal administrative remedies in accordance with Paragraph 13(f)(viii).

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs or Shares at Risk; *provided*, *however*, that your rights will only be terminated in respect of the RSUs and Shares at Risk that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares (which, for the avoidance of doubt, includes any Shares at Risk) for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any Shares at Risk for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(c) Any RSU Shares that were delivered (but not subject to Transfer Restrictions) at the same time any Shares at Risk that are cancelled or required to be repaid were delivered.

(d) [Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or required to be repaid), in accordance with Section 2.8.3 of the Plan.]

(e) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(f) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares[,] [and] dividend payments [and payments under Dividend Equivalent Rights] that are forfeited or required to be repaid.

EXCEPTIONS TO THE VESTING, DELIVERY AND/OR TRANSFERABILITY DATES

11. **Circumstances Under Which You Will Not Forfeit Your Unvested RSUs on Employment Termination (but the Original Delivery Date and Transferability Date Continue to Apply).** If your Employment terminates at a time when you meet the requirements for Extended Absence, Retirement, "downsizing" or Approved Termination, each as described below, then Paragraph 9(a) will not apply, and your Outstanding RSUs will be treated as described in this Paragraph 11. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) Extended Absence or Retirement and No Association With a Covered Enterprise.

(i) Generally. If your Employment terminates by Extended Absence or Retirement, your Outstanding RSUs that are not Vested will become Vested. **However, your rights to any Outstanding RSU that becomes Vested by this Paragraph 11(a)(i) will terminate and no RSU Share will be delivered in respect of that RSU if you Associate With a Covered Enterprise on or before the originally scheduled Vesting Date for that RSU**.

(ii) Special Treatment for Involuntary or Mutual Agreement Termination. [Paragraph 9(b) and] the second sentence of Paragraph 11(a)(i) (each relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" (and, in each case, you have not engaged in conduct constituting Cause) and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement."

(b) Downsizing. If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, your Outstanding RSUs that are not yet Vested will become Vested [and Paragraph 9(b)] will not apply. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.

(c) Approved Terminations of Program Analysts and Fixed-Term Employees. If the Firm classifies you as a "program analyst" or a "fixed-term" employee and your Employment terminates solely by reason of an Approved Termination (and you have not engaged in conduct constituting Cause), your Outstanding RSUs that are not yet Vested will become Vested [and Paragraph 9(b) will not apply].

12. **Accelerated Vesting, Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, then Paragraph 9(a) will not apply, your Outstanding RSUs and Shares at Risk will be treated as described in this Paragraph 12, and, except as set forth in Paragraph 12(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered, and any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 9 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Notwithstanding anything to the contrary in the Plan or otherwise, for purposes of this Award Agreement, "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest. Unless prohibited by applicable law or regulation, the following will apply as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment.

(A) Vesting. If your Employment terminates solely because you resign to accept Conflicted Employment and you have completed at least three years of continuous service with the Firm, your Outstanding RSUs will Vest; otherwise, you will forfeit any Outstanding RSUs that are not Vested in accordance with Paragraph 9(a).

(B) Delivery and Release of Transfer Restrictions. If your Employment terminates solely because you resign to accept Conflicted Employment or if, following your termination of Employment, you notify the Firm that you are accepting Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding Vested RSUs (including in the form of cash as described in Paragraph 13(b)) and any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated vesting, delivery and/or release of Transfer Restrictions described in Paragraph 12(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

13. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding amounts from any payment or distribution to you. In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant, Vesting or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In no event, however, does this Paragraph 13(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSUs that become Vested on a Vesting Date, RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when RSU Shares are delivered to you[, you receive payment in respect of Dividend Equivalent Rights] and you request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash (including dividends [and payments under Dividend Equivalent Rights]) or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs or Shares at Risk, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 9(d)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and Shares at Risk and subject previously delivered amounts to repayment under Paragraph 9(d)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Shares at Risk and Sell, Assign or Transfer Any Forfeited Shares at Risk. You are granting to the Firm the full power and authority to register any Shares at Risk in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Shares at Risk if you forfeit your Shares at Risk;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 16 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

14. **Non-transferability.** Except as otherwise may be provided in this Paragraph 14 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 14 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of RSUs may transfer some or all of their RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the applicable Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

15. **Right of Offset.** Except as provided in Paragraph 18([g][h]), the obligation to deliver RSU Shares, to pay dividends [or payments under Dividend Equivalent Rights] or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

16. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 13(f)(viii).

17. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

18. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 18 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 18 and the other provisions of this Award Agreement, this Paragraph 18 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 11(a)(ii), 11(b), 12(c) and 13 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the

applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 13(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 12(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 12(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 12(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(g) The timing of delivery or payment referred to in Paragraph 12(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 12(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 15 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

COMMITTEE AUTHORITY, AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

19. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 9 and 10 and to remove Transfer Restrictions before the applicable Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraphs 11(a)(ii) and 11(b) will apply upon a termination of Employment and whether a termination of Employment constitutes an Approved Termination under Paragraph 11(c).

20. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

21. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

22. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement (including the forfeiture and repayment provisions in Paragraphs 9 and 10) or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

[CODE STAFF FORFEITURE AND REPAYMENT APPENDIX

This Code Staff Appendix supplements Paragraph 9 and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. As with the events described in Paragraph 9, more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend vesting of Outstanding RSUs, delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares or dividends into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs ([a][b]) through ([d][e]) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Loss Event" (as defined below) or "Risk Event" (as defined below) and the extent to which: (1) you participated in the Loss Event or Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Loss Event, Risk Event, your "Serious Misconduct" (as defined below) or the Serious Misconduct of a "Supervised Employee" (as defined below) and (3) your compensation may be adjusted for the year in which the Loss Event, Risk Event, your Serious Misconduct or a Supervised Employee's Serious Misconduct is discovered.

(a) [You Associate With a Material Covered Enterprise Prior to _____. If you "Associate With a Material Covered Enterprise" (as defined below) before the earlier of _____ or a Qualifying Termination After a Change In Control, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs and your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled. For the avoidance of doubt, notwithstanding the foregoing, (i) the restrictions on Association With a Covered Enterprise described in Paragraph 9(b) will supersede the restrictions on Association With a Material Covered Enterprise described in this Appendix until the January 1 immediately preceding the applicable Delivery Date for your Supplemental RSUs and (ii) if your Base RSUs or Additional Base RSUs become Vested by reason of Extended Absence or Retirement and are subject to forfeiture if you Associate With a Covered Enterprise as described in Paragraph 11(a)(i), the restrictions on Association With a Covered Enterprise in Paragraph 11(a)(i) will supersede the restrictions on Association With a Material Covered Enterprise described in this Appendix until the applicable originally scheduled Vesting Date.

(i) "**Associate With a Material Covered Enterprise**" means that you (A) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any "Material Covered Enterprise" (as defined below) or (B) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Material Covered Enterprise. Associate With a Material Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (A) becoming the subject of any publicly available announcement or report of a pending or future association with a Material Covered Enterprise and (B) unpaid associations, including an association in contemplation of future employment. The term "Association With a Material Covered Enterprise" has its correlative meaning.

(ii) The restriction described above on any Association With a Material Covered Enterprise will not apply if (A) the Firm terminates your Employment solely by reason of a "downsizing" or the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" (and, in each case, you have not engaged in conduct constituting Cause) and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes.

(iii) "**Material Covered Enterprise**" means a Covered Enterprise that the Firm determines, in its sole discretion, to be material.]

(b) A Loss Event Occurs Prior to Delivery. If a Loss Event occurs prior to the delivery of RSU Shares, your rights in respect of all or a portion of your RSUs (whether or not Vested) which are scheduled to deliver on the next Delivery Date immediately following the date that the Loss Event is identified (or, if not practicable, then the next following Delivery Date) will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(i) A "**Loss Event**" means (A) an annual pre-tax loss at GS Inc. or (B) annual negative revenues in one or more reporting segments as disclosed in the Firm's Form 10-K other than the Investing & Lending segment, or annual negative revenues in the Investing & Lending segment of $5 billion or more, *provided* in either case that you are employed in a business within such reporting segment.

(c) A Risk Event Occurs Prior to _____. If a Risk Event occurs prior to _____, (i) your rights in respect of all or a portion of your RSUs (whether or not Vested) will terminate and no RSU Shares will be delivered in respect of such RSUs, (ii) your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled and (iii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(d) You Engage in Serious Misconduct Prior to _____. If you engage in Serious Misconduct during the period beginning on the applicable Transferability Date through_____, you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

(e) A Supervised Employee Engages in Serious Misconduct. If the Committee determines that it is appropriate to hold you accountable in whole or in part for Serious Misconduct related to compliance, control or risk that occurred during the Firm's _____ fiscal year by a Supervised Employee, your rights in respect of all or a portion of your RSUs (whether or not Vested) will terminate and no RSU Shares will be delivered in respect of such RSUs and your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled.

(i) "**Supervised Employee**" means an individual with respect to whom the Committee determines you had supervisory responsibility as a result of direct or indirect reporting lines or your management responsibility for an office, division or business.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs ([b][c]) and ([c][d]) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 16 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount).]

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Approved Termination" means that you are classified by the Firm as a "program analyst" or "fixed-term employee" and you (i) successfully complete the analyst program or fixed-term engagement, as applicable and determined by the Firm in its sole discretion, including remaining Employed through the completion date specified by the Firm, and (ii) terminate Employment immediately after the completion date without any "stay-on" or other agreement or understanding to continue Employment with the Firm. If you agree to stay with the Firm as an employee after your analyst program or fixed-term engagement ends and then later terminate Employment, you will not have an Approved Termination.

(c) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(d) "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest.

(e) "Covered Enterprise" means a Competitive Enterprise and any other existing or planned business enterprise that: (i) offers, holds itself out as offering or reasonably may be expected to offer products or services that are the same as or similar to those offered by the Firm or that the Firm reasonably expects to offer ("Firm Products or Services") or (ii) engages in, holds itself out as engaging in or reasonably may be expected to engage in any other activity that is the same as or similar to any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage ("Firm Activities"). For the avoidance of doubt, Firm Activities include any activity that requires the same or similar skills as any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage, irrespective of whether any such financial activity is in furtherance of an advisory, agency, proprietary or fiduciary undertaking.

The enterprises covered by this definition include enterprises that offer, hold themselves out as offering or reasonably may be expected to offer Firm Products or Services, or engage in, hold themselves out as engaging in or reasonably may be expected to engage in Firm Activities directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by or by being under common ownership with an enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services or that engages in, holds itself out as engaging in or

reasonably may be expected to engage in Firm Activities). The definition of Covered Enterprise includes, solely by way of example, any enterprise that offers, holds itself out as offering or reasonably may be expected to offer any product or service, or engages in, holds itself out as engaging in or reasonably may be expected to engage in any activity, in any case, associated with investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than you or your family members (including, for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading. An enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services, or engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities is a Covered Enterprise**, irrespective of whether the enterprise is a customer, client or counterparty of the Firm or is otherwise associated with the Firm and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(f) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(g) "January __ Transferability Date" means the first trading day in a Window Period that occurs in January __, or if no Window Period occurs in January __, the first trading day of the first Window Period following thereafter.

(h) "_____-Month Transferability Date" means the first trading day in a Window Period that occurs on or after the _____-month anniversary of the Delivery Date.

(i) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(j) "SEC" means the U.S. Securities and Exchange Commission.

(k) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9[(b)][(c)](i) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(l) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity

(the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(i) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(j) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(k) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity; (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in any entity that engages in any activity or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably be expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation: financial services such as investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than the Grantee and members of the Grantee's family (including for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee

has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

(x) "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(y) "RSU Shares" means shares of Common Stock that underlie an RSU.

(z) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(aa) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(bb) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(cc) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(dd) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ee) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(ff) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(gg) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(hh) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
YEAR-END SHORT-TERM RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your _____year-end award of Short-Term RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 14.

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan**. Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement**. The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Short-Term RSUs awarded to you and the Delivery Date.

4. **Definitions**. Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. Vesting. All of your Short-Term RSUs are Vested. When an RSU is Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery) continue to apply to Vested Short-Term RSUs, and you can still forfeit Vested Short-Term RSUs and any RSU Shares**.

DELIVERY OF YOUR RSU SHARES

6. **Delivery**. Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 11(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding Short-Term RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the Short-Term RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

DIVIDENDS

7. **Dividend Equivalent Rights and Dividends.** Each Short-Term RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding Short-Term RSUs for any record date that occurs on or after the Date of Grant.

FORFEITURE OF YOUR AWARD

8. **How You May Forfeit Your Award.** This Paragraph 8 sets forth the events that result in forfeiture of up to all of your Short-Term RSUs and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend payments under Dividend Equivalent Rights or delivery of RSU Shares, (b) deliver any RSU Shares, dividends or payments under Dividend Equivalent Rights into an escrow account in accordance with Paragraph 11 (f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 8 have occurred. Paragraph 10 (relating to certain circumstances under which delivery may be accelerated) provides for exceptions to one or more provisions of this Paragraph 8. [The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Short-Term RSUs and may require repayment to the Firm as described in Paragraph 9 and the Appendix.]

(a) Short-Term RSUs Forfeited Upon Certain Events. If any of the following occurs, your rights to all of your Outstanding Short-Term RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause**.** Any event that constitutes Cause [(including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix)] has occurred before the Delivery Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Delivery Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 14 or Section 3.17 of the Plan, or you attempt to arbitrate a dispute without first having exhausted your internal administrative remedies in accordance with Paragraph 11(f)(vii).

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding Short-Term RSUs; *provided*, *however*, that your rights will only be terminated in respect of the Short-Term RSUs that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

9. **When You May Be Required to Repay Your Award**. If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares for which the terms (including the terms for delivery) of the related Short-Term RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of Short-Term RSUs that are forfeited or RSU Shares that are cancelled or required to be repaid), in accordance with Section 2.8.3 of the Plan.

(c) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(d) Any amount applied to satisfy tax withholding or other obligations with respect to any Short-Term RSU, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

EXCEPTIONS TO THE DELIVERY DATE

10. **Accelerated Delivery in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding Short-Term RSUs will be treated as described in this Paragraph 10, and, except as set forth in Paragraph 10(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding Short-Term RSUs will be delivered. In addition, the forfeiture events in Paragraph 8 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Notwithstanding anything to the contrary in the Plan or otherwise, for purposes of this Award Agreement, "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding Short-Term RSUs would result in an actual or perceived conflict of interest. Unless prohibited by applicable law or regulation, if your Employment terminates solely because you resign to accept Conflicted Employment or if, following your termination of Employment, you notify the Firm that you are accepting Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding Short-Term RSUs (including in the form of cash as described in Paragraph 11(b)) as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery described in Paragraph 10(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding Short-Term RSUs will be delivered to the representative of your estate as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

11. **Additional Terms, Conditions and Agreements**.

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding amounts from any payment or distribution to you. In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In no event, however, does this Paragraph 11(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any

portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSU Shares that become deliverable on a Delivery Date may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Short-Term RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Short-Term RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when RSU Shares are delivered to you, and you receive payment in respect of Dividend Equivalent Rights;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares or the payment of cash (including dividends and payments under Dividend Equivalent Rights) or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold Short-Term RSUs, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 8(a)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your Short-Term RSUs and subject previously delivered amounts to repayment under Paragraph 8(a)(iv);

(vii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 14 and Section 3.17 of the Plan; and

(viii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

12. **Non-transferability.** Except as otherwise may be provided in this Paragraph 12 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 12 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Short-Term RSUs may transfer some or all of their Short-Term RSUs through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

13. **Right of Offset.** Except as provided in Paragraph 16(h), the obligation to deliver RSU Shares or to make payments under Dividend Equivalent Rights under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

14. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 11(f)(vii).

15. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

16. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 16 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 16 and the other provisions of this Award Agreement, this Paragraph 16 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 10(c) and 11 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 11(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your Short-Term RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 10(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 10(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of

additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 10(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 7 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding Short-Term RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding Short-Term RSUs.

(g) The timing of delivery or payment referred to in Paragraph 10(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 10(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 13 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

COMMITTEE AUTHORITY, AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

17. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply and to limit the forfeitures and repayments that result under Paragraphs 8 and 9.

18. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

19. **Construction,** Headings. Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

20. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement (including the forfeiture and repayment provisions in Paragraphs 8 and 9) or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

[**CODE STAFF FORFEITURE AND REPAYMENT APPENDIX**

This Code Staff Appendix supplements Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Short-Term RSUs and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. As with the events described in Paragraph 8, more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend payments under Dividend Equivalent Rights or delivery of RSU Shares, (b) deliver any RSU Shares, dividends or payments under Dividend Equivalent Rights into an escrow account in accordance with Paragraph 11(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs (a) and (b) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Risk Event" (as defined below) and the extent to which: (1) you participated in the Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Risk Event or your "Serious Misconduct" (as defined below) and (3) your compensation may be adjusted for the year in which the Risk Event or your Serious Misconduct is discovered.

(a) A Risk Event Occurs Prior to _____. If a Risk Event occurs prior to _____ , (i) your rights in respect of all or a portion of your Short-Term RSUs will terminate and no RSU Shares will be delivered in respect of such Short-Term RSUs and (ii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(b) You Engage in Serious Misconduct Prior to _____. If you engage in Serious Misconduct during the period beginning on the Delivery Date through _____, you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs (a) and (b) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 14 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount).]

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding Short-Term RSUs would result in an actual or perceived conflict of interest.

(c) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(d) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(e) "SEC" means the U.S. Securities and Exchange Commission.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were

outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(i) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(j) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(k) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(l) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(m) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(n) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(o) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee

shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(p) "Firm" means GS Inc. and its subsidiaries and affiliates.

(q) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(r) "Grantee" means a person who receives an Award.

(s) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(t) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(u) "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(v) "RSU Shares" means shares of Common Stock that underlie an RSU.

(w) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(x) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(y) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(z) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(aa) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(bb) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(cc) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
FIXED ALLOWANCE RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your _____Fixed Allowance award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 13.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Fixed Allowance RSUs awarded to you and any applicable Delivery Dates and Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR FIXED ALLOWANCE RSUS

5. **Vesting.** All of your Fixed Allowance RSUs are Vested. When a Fixed Allowance RSU is Vested, it means that your continued active Employment is not required for delivery of that portion of RSU Shares. **The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested Fixed Allowance RSUs.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 10(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding Fixed Allowance RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the Fixed Allowance RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.** Fifty percent of the RSU Shares that are delivered on any date, **before** tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk. This means that if, for example, on a Delivery Date, you are scheduled to receive delivery of 1,000 RSU Shares, and you are subject to a 40% withholding rate, then (a) 400 RSU Shares will be withheld for taxes, (b) 500 RSU Shares delivered to you will be Shares at Risk and (c) 100 RSU Shares delivered to you will not be subject to Transfer Restrictions. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

8. **Dividend Equivalent Rights and Dividends.** Each Fixed Allowance RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding Fixed Allowance RSUs for any record date that occurs on or after the Date of Grant. In addition, you will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk.

EXCEPTIONS TO DELIVERY AND/OR TRANSFERABILITY DATES

9. **Accelerated Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding RSUs and Shares at Risk will be treated as described in this Paragraph 9.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding Fixed Allowance RSUs will be delivered, and any Transfer Restrictions will cease to apply.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Notwithstanding anything to the contrary in the Plan or otherwise, for purposes of this Award Agreement, "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest. If your Employment terminates solely because you resign to accept

Conflicted Employment or if, following your termination of Employment, you notify the Firm that you are accepting Conflicted Employment, unless prohibited by applicable law or regulation, RSU Shares will be delivered in respect of your Outstanding Fixed Allowance RSUs (including in the form of cash as described in Paragraph 10(b)) and any Transfer Restrictions will cease to apply as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery and/or release of Transfer Restrictions described in Paragraph 9(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding Fixed Allowance RSUs will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

10. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding amounts from any payment or distribution to you. In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In no event, however, does this Paragraph 10(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Fixed Allowance RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3 (d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Fixed Allowance RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when RSU Shares are delivered to you, you receive payment in respect of Dividend Equivalent Rights and you request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash (including dividends and payments under Dividend Equivalent Rights) or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the

determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 13 and Section 3.17 of the Plan; and

(vii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

11. **Non-transferability.** Except as otherwise may be provided in this Paragraph 11 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 11 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Fixed Allowance RSUs may transfer some or all of their Fixed Allowance RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

12. **Right of Offset.** Except as provided in Paragraph 15(h), the obligation to deliver RSU Shares, to pay dividends or payments under Dividend Equivalent Rights or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

13. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 10(f)(vi).

14. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

15. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 15 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 15 and the other provisions of this Award Agreement, this Paragraph 15 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 9(c) and 10 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 10(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your Fixed Allowance RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 9(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 9(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 9(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding Fixed Allowance RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding Fixed Allowance RSUs.

(g) The timing of delivery or payment referred to in Paragraph 9(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 9(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 12 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

16. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

17. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

18. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding RSUs and Shares at Risk would result in an actual or perceived conflict of interest.

(c) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(d) "SEC" means the U.S. Securities and Exchange Commission.

(e) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation

or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(k) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(l) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, provided, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(m) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(n) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(o) "Firm" means GS Inc. and its subsidiaries and affiliates.

(p) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(q) "Grantee" means a person who receives an Award.

(r) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(s) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(t) "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(u) "RSU Shares" means shares of Common Stock that underlie an RSU.

(v) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(w) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(x) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(y) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(z) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(aa) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(bb) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (provided that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
FIXED ALLOWANCE RESTRICTED STOCK AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your award of _____Fixed Allowance Restricted Shares (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 12.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Fixed Allowance Restricted Shares awarded to you and any applicable Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR FIXED ALLOWANCE RESTRICTED SHARES

5. **Vesting.** All of your Fixed Allowance Restricted Shares are Vested. When a Fixed Allowance Restricted Share is Vested, it means that your continued active Employment is not required for that portion of Restricted Shares to become fully transferable without risk of forfeiture. **The terms of this Award Agreement (including any applicable Transfer Restrictions) continue to apply to Vested Fixed Allowance Restricted Shares.**

TRANSFER RESTRICTIONS

6. **Transfer Restrictions.** Fixed Allowance Restricted Shares will be subject to Transfer Restrictions until the Transferability Date next to such number or percentage of Restricted Shares on your Award Statement. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Restricted Shares with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

7. **Dividends.** You will be entitled to receive on a current basis any regular cash dividend paid in respect of your Fixed Allowance Restricted Shares.

EXCEPTIONS TO TRANSFERABILITY DATES

8. **Accelerated Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding Restricted Shares will be treated as described in this Paragraph 8.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, any Transfer Restrictions will cease to apply.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. Notwithstanding anything to the contrary in the Plan or otherwise, for purposes of this Award Agreement, "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding Restricted Shares would result in an actual or perceived conflict of interest. If your Employment terminates solely because you resign to accept Conflicted Employment or if, following your termination of Employment, you notify the Firm that you are accepting Conflicted Employment, unless prohibited by applicable law or regulation, any Transfer Restrictions will cease to apply as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated release of Transfer Restrictions described in Paragraph 8(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

9. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Removal of the Transfer Restrictions is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding

amounts from any payment or distribution to you. In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise), (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you under this Award or (iii) shares of Common Stock delivered to you pursuant to this Award.

(b) Firm May Deliver Cash or Other Property Instead of Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the shares of Common Stock, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of shares of Common Stock will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. Restricted Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional shares of Common Stock.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Fixed Allowance Restricted Shares are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted Shares. GS Inc. may affix to Certificates representing shares of Common Stock any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended shares of Common Stock.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in shares of Common Stock and hedging or pledging shares of Common Stock and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, and you will effect sales of shares of Common Stock in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Fixed Allowance Restricted Shares, including those related to the sale of shares of Common Stock;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Sell Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you request the sale of shares of Common Stock following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of shares of Common Stock (including Restricted Shares) or the payment of cash (including dividends) or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of shares of Common Stock, cash or other property required by this Award Agreement have been satisfied;

(vi) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 12 and Section 3.17 of the Plan; and

(vii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

10. **Non-transferability.** Except as otherwise may be provided in this Paragraph 10 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 10 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Fixed Allowance Restricted Shares may transfer some or all of their Fixed Allowance Restricted Shares (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

11. **Right of Offset.** The obligation to pay dividends or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

12. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 9(f)(vi).

13. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

14. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially

adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

15. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

16. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Conflicted Employment" means your employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer (other than an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X or any successor thereto) determined by the Committee, if, as a result of such employment, your continued holding of any Outstanding Restricted Shares would result in an actual or perceived conflict of interest.

(c) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(d) "SEC" means the U.S. Securities and Exchange Commission.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion

and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(k) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(l) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(m) "Fair Market Value" means, with respect to a share of Common Stock on any day, the fair market value as determined in accordance with a valuation methodology approved by the Committee.

(n) "Firm" means GS Inc. and its subsidiaries and affiliates.

(o) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(p) "Grantee" means a person who receives an Award.

(q) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(r) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(s) "Restricted Share" means a share of Common Stock delivered under the Plan that is subject to Transfer Restrictions, forfeiture provisions and/or other terms and conditions specified in the Plan and in the Award Agreement or other applicable Award Agreement. All references to Restricted Shares include "Shares at Risk."

(t) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(u) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(v) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(w) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(x) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(y) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (provided that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

THE GOLDMAN SACHS GROUP, INC.
YEAR-END PERFORMANCE-BASED RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "Plan"), governs your award of performance-based RSUs (your "Award" or "PSUs"). You should read carefully this entire Award Agreement, which includes the Award Statement, any attached Appendix and the signature card.

ACCEPTANCE

1. You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 17.

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of PSUs subject to this Award, the Performance Period and the Performance Goal applicable to your Award. [It also contains the Determination Date and the Settlement Date for your Award and the Transferability Date for any Shares at Risk that may be delivered to you in respect of any Settlement Amount that you may earn.] The number of PSUs on your Award Statement is not necessarily the number of PSUs in respect of which the Settlement Amount will be earned, but is merely the basis for determining the amount (if any) that will be delivered to you.

4. **Definitions.** Capitalized terms are defined in the Award Statement or the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR PSUS

5. **Vesting.** Your PSUs are Vested. When a PSU is Vested, it means **only** that your continued active Employment is not required to earn delivery in respect of that PSU. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery and satisfaction of the Performance Goal) continue to apply to your Award, and failure to meet such terms may result in the termination of this Award (as a result of which no delivery in respect of such Vested PSUs would be made).**

PERFORMANCE GOAL

6. **Performance.** The Settlement Amount is dependent, and may vary based, on achievement of the Performance Goal over the Performance Period. On the Determination Date, the Firm will determine whether or not, and to what extent, the Performance Goal for that Performance Period has been satisfied. All your rights with respect to the Settlement Amount (and any Dividend Equivalent Payments) are dependent on the extent to which the Performance Goal is achieved, and any rights to delivery in respect of your Outstanding PSUs immediately will terminate and no Settlement Amount will be delivered in respect of such PSUs upon the Committee's determination, in its sole discretion, that the Performance Goal has not been satisfied to the extent necessary to result in delivery in respect of the PSUs.

SETTLEMENT AMOUNT

7. **Settlement.**

(a) In General. Subject to satisfaction of the terms of this Award, including satisfaction of the Performance Goal, on the Settlement Date, you will receive delivery (less applicable withholding as described in Paragraph 14(a)) of the Settlement Amount and payment of any Dividend Equivalent Payments as further described in this Award Agreement and in your Award Statement. Until such delivery and payment, you have only the rights of a general unsecured creditor and you do not have any rights as a shareholder of GS Inc. with respect to either the PSUs or the Settlement Amount. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Settlement Date by up to 30 days.

(b) [Form of Delivery. The Settlement Amount will be delivered as follows:

(i) __% in the form of cash that will be paid on the Settlement Date.

(ii) __% in the form of Shares at Risk.

(c) Shares at Risk. All of the Shares delivered (after application of tax withholding) to you in respect of the Settlement Amount will be Shares at Risk subject to Transfer Restrictions until the Transferability Date. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.]

DIVIDEND EQUIVALENT RIGHTS

8. **Dividend Equivalent Rights.** To the extent described in your Award Statement, each PSU will include a Dividend Equivalent Right, which will be subject to the provisions of Section 2.8 of the Plan. Accordingly, for each of your Outstanding PSUs with respect to which delivery is made under the Settlement Amount, you will be entitled to payments under Dividend Equivalent Rights equal to any regular cash dividend paid by GS Inc. in respect of a Share the record date for which occurs on or after the Date of Grant. The payment to you of amounts under Dividend Equivalent Rights (less applicable withholding as described in Paragraph 14(a)) is conditioned upon the delivery under the Settlement Amount in respect of the PSUs to which such Dividend Equivalent Rights relate, and you will have no right to receive any Dividend Equivalent Payments relating to PSUs for which you do not receive delivery under the Settlement Amount (including, without limitation, due to a failure to satisfy the Performance Goal). Dividend Equivalent Payments will be paid on the Settlement Date.

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your PSUs [and Shares at Risk] and may require repayment to the Firm of up to all amounts previously paid or delivered to you under your PSUs in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend delivery of the Settlement Amount and payment of any Dividend Equivalent Payments [or release Transfer Restrictions on Shares at Risk] or (b) pay cash (including Dividend Equivalent Payments or dividends) [or deliver Shares at Risk into an escrow account in accordance with Paragraph 14(f)(v)]. [Paragraph 13 (relating to certain circumstances under which release of Transfer Restrictions may be accelerated) provides for exceptions to one or more provisions of this Paragraph 9.]

(a) PSUs Forfeited Upon Certain Events. If any of the following occurs, your rights to all of your Outstanding PSUs will terminate, and no Settlement Amount will be delivered in respect thereof, as may be further described below:

(i) You Associate With a Covered Enterprise. You Associate With a Covered Enterprise during the Performance Period.

(ii) You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. Before the Settlement Date, either:

(A) you, in any manner, directly or indirectly, (1) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (2) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (3) Solicit any person who is an employee of the Firm to resign from the Firm, (4) Solicit any Selected Firm Personnel to apply for or accept employment (or other association) with any person or entity other than the Firm or (5) hire or participate in the hiring of any Selected Firm Personnel by any person or entity other than the Firm (including, without limitation, participating in the identification of individuals for potential hire, and participating in any hiring decision), whether as an employee or consultant or otherwise, or

(B) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status by (1) any entity that you form, that bears your name, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (2) any entity where you have, or will have, direct or indirect managerial responsibility for such Selected Firm Personnel.

(iii) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(iv) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the Settlement Date.

(v) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Settlement Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(vi) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(vii) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 17 or Section 3.17 of the Plan, or you attempt to arbitrate a dispute without first having exhausted your internal administrative remedies in accordance with Paragraph 14[(f)(viii)].

(viii) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(ix) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of your Outstanding PSUs.

(x) GS Inc. Fails to Maintain the Minimum Tier 1 Capital Ratio. Before the Settlement Date, GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.

(xi) GS Inc. Is Determined to Be in Default. Before the Settlement Date, the Board of Governors of the Federal Reserve or the FDIC makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."

(xii) Accounting Restatement Required Under Sarbanes-Oxley. GS Inc. is required to prepare an accounting restatement due to GS Inc.'s material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws as described in Section 304(a) of Sarbanes-Oxley; *provided*, *however*, that your rights with respect to the PSUs will only be terminated to the same extent that would be required under Section 304(a) of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).

(b) [Shares at Risk Forfeited upon Certain Events. To the extent you receive delivery of Shares at Risk in connection with any Settlement Amount, if any of the following occurs your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's 2018 fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the Transferability Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Transferability Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 17 or Section 3.17 of the Plan, or you attempt to arbitrate a dispute without first having exhausted your internal administrative remedies in accordance with Paragraph 14[(f)(viii)].

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Shares at Risk; *provided*, *however*, that your rights will only be terminated in respect of the Shares at Risk that are replaced, substituted for or otherwise considered by such other entity in making its grant.

(viii) Accounting Restatement Required Under Sarbanes-Oxley. GS Inc. is required to prepare an accounting restatement due to GS Inc.'s material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws as described in Section 304(a) of Sarbanes-Oxley; *provided*, *however*, that your rights will only be terminated in respect of Shares at Risk to the same extent that would be required under Section 304(a) of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).]

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.**

(a) Repayment, Generally. If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(i) Any Settlement Amount [(including any Shares at Risk)] for which the terms (including the terms for payment) of the related PSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(ii) [Any Shares at Risk for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.]

(iii) Any Dividend Equivalent Payments for which the terms were not satisfied (including any such payments made in respect of PSUs that are forfeited or any Settlement Amount that is required to be repaid), in accordance with Section 2.8.3 of the Plan.

(iv) [Any dividends paid in respect of any Shares at Risk that are cancelled or required to be repaid.]

(v) Any amount applied to satisfy tax withholding or other obligations with respect to any PSU, Settlement Amount [(including Shares at Risk)], dividend payments or Dividend Equivalent Payments that are forfeited or required to be repaid.

(b) Repayment Upon Materially Inaccurate Financial Statements. If any delivery is made under this Award Agreement based on materially inaccurate financial statements (which includes, but is not limited to, statements of earnings, revenues or gains) or other materially inaccurate performance criteria, you will be obligated to repay to the Firm, immediately upon demand therefor, any excess amount delivered, as determined by the Committee in its sole discretion.

(c) Repayment Upon Accounting Restatement Required Under Sarbanes-Oxley. If an event described in Paragraphs 9(a)(xii) and 9(b)(viii) (relating to a requirement under Sarbanes-Oxley that GS Inc. prepare an accounting restatement) occurs, any Settlement Amount [(including Shares at Risk)], dividend payments, Dividend Equivalent Payments, cash or other property delivered, paid or withheld in respect of this Award will be subject to repayment as described in Paragraph 10(a) to the same extent that would be required under Section 304(a) of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).

[ADDITIONAL FORFEITURE FOR CERTAIN INVESTIGATIONS

11. **Additional Forfeitures.**

(a) Forfeiture of PSUs [and Shares at Risk]. In addition to and without limiting the Firm's rights under the forfeiture and repayment provisions set forth in Paragraphs 9 and 10, if the Committee determines that the number of PSUs subject to this Award would have been impacted by the results of the investigation relating to 1Malaysia Development Berhad ("1MDB"), the Committee may: (i) terminate your rights to such number of PSUs subject to this Award; [and (ii) if and to the extent you receive delivery of Shares at Risk in connection with any Settlement Amount, cause such number of your Shares at Risk to be cancelled, in either case] as it determines in its sole discretion to be appropriate in light of the results of the 1MDB investigation, and your rights with respect to the number of such PSUs [and Shares at Risk] will terminate (and in the case of PSUs, no Settlement Amount will be delivered in respect thereof).

(b) Suspension and Escrow. In addition, the Firm reserves the right to: (i) suspend delivery of the Settlement Amount and payments under Dividend Equivalent Rights prior to the Settlement Date [or release of Transfer Restrictions prior to the Transferability Date;] or (ii) pay any cash (including Dividend Equivalent Payments or dividends) [or deliver Shares at Risk, in any case, into an escrow account in accordance with Paragraph 14 (f)(v)] until the Committee determines whether the termination of your rights to any PSUs [or Shares at Risk] in accordance with Paragraph 11(a) is appropriate.

(c) [Repayment of Tax Withholding. If any Shares at Risk are cancelled in accordance with Paragraph 11(a), you will be obligated immediately upon demand therefor to pay the Firm an amount equal to any withholding taxes in respect of such Shares at Risk.]]

TERMINATIONS OF EMPLOYMENT

12. **PSUs and Termination of Employment.**

(a) Employment Termination Generally. Unless the Committee determines otherwise, if your Employment terminates for any reason or you are otherwise no longer actively Employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), the Performance Goal applicable to your Outstanding PSUs will continue to apply and the determination of the Settlement Amount will continue to be subject to whether or not, and to what extent, the Performance Goal has been achieved, in each case, as provided in Paragraph 6. All other terms of this Award Agreement, including the forfeiture and repayment events in Paragraphs 9, 10 and 11, continue to apply.

(b) Death. If you die before the Settlement Date, the representative of your estate will, on the Settlement Date, receive delivery of the Settlement Amount and payment of the Dividend Equivalent Payments that, in each case, would have otherwise been made pursuant to Paragraph 6 [and any Transfer Restrictions on Shares at Risk will cease to apply in accordance with Paragraph 13(b)], after such documentation as may be requested by the Committee is provided to the Committee. All other terms of this Award Agreement, including the forfeiture and repayment events in Paragraphs 9, 10 and 11, continue to apply.

(c) Restrictions on Association With a Covered Enterprise Cease to Apply After an Involuntary or Mutual Agreement Termination. Paragraph 9(a)(i) (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (i) your Employment terminates and the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" (and, in each case, you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement." All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9, 10 and 11, continue to apply.

13. [**Accelerated Release of Transfer Restrictions on Shares at Risk in the Event of a Qualifying Termination After a Change in Control or Death.** To the extent you receive delivery of Shares at Risk in connection with any Settlement Amount, in the event of your Qualifying Termination After a Change in Control or death, each as described below, your Shares at Risk will be treated as described in this Paragraph 13, and, except as set forth in Paragraph 13(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9, 10 and 11, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, any Transfer Restrictions will cease to apply to your Shares at Risk. In addition, the forfeiture events in Paragraph 9 will not apply to your Shares at Risk.

(b) Death. If you die, any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.]

OTHER TERMS, CONDITIONS AND AGREEMENTS

14. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of the Settlement Amount is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, which includes the Firm deducting or withholding amounts from any payment or distribution to you. To the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or payment of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of Shares delivered to you pursuant to this Award. In no event, however, does this Paragraph 14(a) give you any discretion to determine or affect the timing of delivery of the Settlement Amount or the timing of payment of tax obligations.

(b) [Firm May Deliver Cash or Other Property in Respect of the Settlement Amount. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the Settlement Amount, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to delivery of the Settlement Amount will include such deliveries of cash, other securities, other awards under the Plan or other property.]

(c) [Amounts May Be Rounded to Avoid Fractional Shares. Any amounts delivered in respect of the Settlement Amount, including Shares at Risk, may be rounded to avoid fractional Shares.]

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your PSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Shares. GS Inc. may affix to Certificates representing Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended Shares.]

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in Shares and hedging or pledging Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards" or any successor policies), and confidential or proprietary information, [and you will effect sales of Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm)];

(iii) [You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Shares at Risk, including those related to the sale of Shares];

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you accept payment in respect of your Award[, and you request the sale of Shares following the release of Transfer Restrictions on Shares at Risk];

(v) Firm May Make Deliveries into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the Settlement Amount may initially be delivered, and any Dividend Equivalent Payments may initially be paid, into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on deliveries required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold PSUs [or Shares at Risk], from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraphs 9(a)(vi) and 9(b)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your PSUs [or Shares at Risk] and subject previously delivered amounts to repayment under Paragraphs 9(a)(vi) and 9(b)(iv);

(vii) [You Authorize the Firm to Register, in Its or Its Designee's Name, Any Shares at Risk and Sell, Assign or Transfer Any Forfeited Shares at Risk. You are granting to the Firm the full power and authority to register any Shares at Risk in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Shares at Risk if you forfeit your Shares at Risk];

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee. If you disagree with a determination made by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees and you wish to appeal such determination, you must submit a written request to the SIP Committee for review within 180 days after the determination at issue. You must exhaust your internal administrative remedies (*i.e.*, submit your appeal and wait for resolution of that appeal) before seeking to resolve a dispute through arbitration pursuant to Paragraph 17 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

15. **Non-transferability.** Except as otherwise may be provided in this Paragraph 15 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 15 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of PSUs and Shares at Risk may transfer some or all of their PSUs [or Shares at Risk (which will continue to be subject to Transfer Restrictions until the Transferability Date)] through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

16. **Right of Offset.** Except as provided in Paragraph 19(d), the obligation to deliver the Settlement Amount, pay dividends or Dividend Equivalent Payments [or release Transfer Restrictions] under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

17. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN; PROVIDED THAT NOTHING HEREIN SHALL PRECLUDE YOU FROM FILING A CHARGE WITH OR PARTICIPATING IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY GOVERNMENTAL AUTHORITY, INCLUDING BUT NOT LIMITED TO THE SEC AND THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(e) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

(f) By accepting your Award, you irrevocably appoint each General Counsel of GS Inc., or any person whom the General Counsel of GS Inc. designates, as your agent for service of process in

connection with any suit, action or proceeding arising out of or relating to or concerning the Plan or any Award which is not arbitrated pursuant to the provisions of Section 3.17.1 of the Plan, who shall promptly advise you of any such service of process.

(g) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider any claim as to which you have not first exhausted your internal administrative remedies in accordance with Paragraph 14[(f)(viii)].

18. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

19. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 19 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 19 and the other provisions of this Award Agreement, this Paragraph 19 will govern.

(b) Settlement will not be delayed beyond the date on which all applicable conditions or restrictions on settlement in respect of your PSUs required by this Award Agreement (including those specified in Paragraph 12(c) (execution of waiver and release of claims agreement to pay associated tax liability) and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, settlement in respect of such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. § 1.409A-1(b)(4) in order for settlement to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on settlement to be satisfied, the Committee elects, pursuant to Reg. § 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay settlement to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. § 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. § 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any delivery or payment [(including in the form of Shares at Risk or other property)] that the Firm may make in respect of your PSUs will not have the effect of deferring payment, delivery, income inclusion, or a substantial risk of forfeiture, beyond the date on which such payment, delivery or inclusion would occur or such risk of forfeiture would lapse, with respect to the payment or delivery that would otherwise have been made (unless the Committee elects a later date for this purpose pursuant to Reg. § 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. § 1.409A-2(b)).

(d) Paragraph 16 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(e) Settlement in respect of any portion of the Award may be made, if and to the extent elected by the Committee, later than the relevant Settlement Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later payment or delivery, as applicable, is permitted under Section 409A).

(f) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

COMMITTEE AUTHORITY, AMENDMENT, CONSTRUCTION AND REGULATORY REPORTING

20. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 9, 10 and 11 [and to remove Transfer Restrictions before the Transferability Date]. In addition, the Committee, in its sole discretion, may determine whether Paragraph 12(c) will apply upon a termination of Employment.

21. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided that*, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

22. **Construction, Headings.** Unless the context requires otherwise, (i) words describing the singular number include the plural and vice versa, (ii) words denoting any gender include all genders and (iii) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

23. **Providing Information to the Appropriate Authorities.** In accordance with applicable law, nothing in this Award Agreement (including the forfeiture and repayment provisions in Paragraphs 9, 10 and 11) or the Plan prevents you from providing information you reasonably believe to be true to the appropriate governmental authority, including a regulatory, judicial, administrative, or other governmental entity; reporting possible violations of law or regulation; making other disclosures that are protected under any applicable law or regulation; or filing a charge or participating in any investigation or proceeding conducted by a governmental authority.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of the Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(c) "Covered Enterprise" means a Competitive Enterprise and any other existing or planned business enterprise that: (i) offers, holds itself out as offering or reasonably may be expected to offer products or services that are the same as or similar to those offered by the Firm or that the Firm reasonably expects to offer ("Firm Products or Services") or (ii) engages in, holds itself out as engaging in or reasonably may be expected to engage in any other activity that is the same as or similar to any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage ("Firm Activities"). For the avoidance of doubt, Firm Activities include any activity that requires the same or similar skills as any financial activity engaged in by the Firm or in which the Firm reasonably expects to engage, irrespective of whether any such financial activity is in furtherance of an advisory, agency, proprietary or fiduciary undertaking.

The enterprises covered by this definition include enterprises that offer, hold themselves out as offering or reasonably may be expected to offer Firm Products or Services, or engage in, hold themselves out as engaging in or reasonably may be expected to engage in Firm Activities directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by or by being under common ownership with an enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services or that engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities). The definition of Covered Enterprise includes, solely by way of example, any enterprise that offers, holds itself out as offering or reasonably may be expected to offer any product or service, or engages in, holds itself out as engaging in or reasonably may be expected to engage in any activity, in any case, associated with investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than you or your family members (including, for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading. An enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services, or engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities is a Covered Enterprise**, irrespective of whether the enterprise is a customer, client or counterparty of the Firm or is otherwise associated with the Firm and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(d) "Determination Date" means the date specified on your Award Statement as the date on which the Committee will determine whether or not, and to what extent, the Performance Goal was achieved for the Performance Period.

(e) "Dividend Equivalent Payments" means any payments made in respect of Dividend Equivalent Rights.

(f) "FDIC" means the Federal Deposit Insurance Corporation or any successor thereto.

(g) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(h) "Performance Goal" means the performance goal determined by the Committee that is specified on your Award Statement.

(i) "Performance Period" means the performance period determined by the Committee that is specified on your Award Statement.

(j) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(k) "Sarbanes-Oxley" means the Sarbanes-Oxley Act of 2002, as amended.

(l) "SEC" means the U.S. Securities and Exchange Commission.

(m) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9(a)(ii) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(n) ["Settlement Amount" means an amount deliverable to you in respect of your PSUs (determined as described in the Award Statement).]

(o) ["Settlement Date" means the date that is specified on your Award Statement on which the Settlement Amount will be delivered.]

(p) "Share" means a share of Common Stock.

(q) ["Shares at Risk" means Shares that are subject to Transfer Restrictions.]

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan:

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any related Award Statement and signature card.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Board" means the Board of Directors of GS Inc.

(e) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(f) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(g) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity

(the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(h) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(i) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the applicable rulings and regulations thereunder.

(j) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(k) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(l) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity; (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in any entity that engages in any activity or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably be expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation: financial services such as investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than the Grantee and members of the Grantee's family (including for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital or commercial banking; merchant banking; asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading.

(m) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(n) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Firm" means GS Inc. and its subsidiaries and affiliates.

(r) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(s) "Grantee" means a person who receives an Award.

(t) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(u) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(v) "RSU" means a restricted stock unit granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(w) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(x) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(y) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(z) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(aa) ["Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.]

(bb) ["Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.]

(cc) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

Exhibit 10.59

The Goldman Sachs Group, Inc.
SIGNATURE CARD FOR AWARDS
AND CONSENT TO RECEIVE ELECTRONIC DELIVERY

IMPORTANT: PLEASE REVIEW, EXECUTE AND RETURN THIS FORM TO:_____

YOU MUST PROPERLY EXECUTE THIS FORM TO ACKNOWLEDGE ACCEPTANCE OF THE TERMS AND CONDITIONS OF YOUR AWARD(S) AND RELATED MATTERS.

1. I have received and agree to be bound by The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) (the "SIP") and the Award Agreement(s) applicable to me in connection with the Award(s) (the "Award(s)") that I have been granted by the Firm (as defined in the SIP). I confirm that I am accepting the Award (s) subject to the terms and conditions contained in the SIP, the Award Agreement(s), and this signature card (the "Signature Card"), including, but not limited to, the requirement that certain disputes be decided through arbitration in New York City and be governed by New York law. For the avoidance of doubt, references to a "share" or "Share" herein mean a share of the common stock of The Goldman Sachs Group, Inc. ("GS Inc.") and, where applicable, deliveries of cash or other property in lieu thereof.

For the avoidance of doubt, I understand and agree that to be eligible to receive any award under the SIP or any predecessor plan, I must not have engaged in any conduct constituting "Cause" (as defined in the SIP) prior to the grant of the award, and by accepting this Award, I represent and warrant that I have not engaged in any conduct constituting Cause.

As a condition of this grant, I understand that the Award(s) (as well as any other award that the Firm may grant to me under the SIP) is/are subject to governing law provisions as outlined in this Signature Card or in the applicable Award Agreement(s), and, as a condition to receiving such awards, I agree to be bound thereby. As a condition of this grant, I agree to provide upon request an appropriate certification regarding my U.S. tax status on Form W-8BEN, Form W-9, or other appropriate form, and I understand that failure to supply a required form may result in the imposition of backup withholding on certain payments I receive pursuant to this grant.

I irrevocably grant full power and authority to GS Inc. to register in its name, or that of any designee, any and all Restricted Shares (as defined in the applicable Award Agreement), Shares at Risk (as defined in the applicable Award Agreement) or other shares of GS Inc. common stock that have been or may be delivered to me subject to transfer restrictions or forfeiture provisions, and I irrevocably authorize GS Inc., or its designee, to sell, assign or transfer such shares to GS Inc. or such other persons as it may determine in the event of a forfeiture of such shares pursuant to any agreement with GS Inc.

Further, as a condition of this grant, if I am a person who has worked in the United Kingdom at any time during the earnings period relating to any award under the SIP, as determined by the Firm, when requested and as directed by the Firm, I will agree to a Joint Election under s431 ITEPA 2003 of the laws of the United Kingdom for full or partial disapplication of Chapter 2 Income Tax (Earnings and Pension) Act 2003 under the laws of the United Kingdom and will sign and return such election in respect of all future deliveries of Shares underlying the Award(s) and any previous grants made to me under the SIP and understand that the Firm intends to meet its delivery obligations in Shares with respect to my Award(s), except as may be prohibited by law or described in the accompanying Award Agreement(s) or supplementary materials.

If I have worked in Switzerland at any time during the earnings period relating to the Award(s) granted to me as determined by the Firm, (i) I acknowledge that my Award(s) are subject to tax in accordance with the rulings and method of calculation of taxable values to be agreed by the Firm with the Federal and/or Zurich/Geneva cantonal/communal tax authorities or as otherwise directed by the Firm, and (ii) I hereby agree to be bound by any rulings agreed by the Firm in respect of any Award(s), which is expected to result in taxation at the time of delivery of Shares, and (iii) I undertake to declare and make a full and accurate income tax declaration in respect of my Award(s) in accordance with the above ruling or as directed by the Firm.

2. I have read and understand the Firm's "Notice Periods for Recipients of Year-End Equity-Based Awards" policy (the "Notice Policy") available through the HR Workways® link on GSWeb or as otherwise provided to me, pursuant to which I am required to provide certain specified advance notice of my intent to leave employment with the Firm. By executing this form, I am agreeing to be bound by the Notice Policy as in effect from time to time and, where applicable, am agreeing to a permanent change in the terms and conditions of my employment. I agree to this change in consideration of my continued employment with the Firm and the Firm's offer of the Award(s). I understand that the Notice Policy requires me, among other things, to provide my employing entity with advance written notice of my intention to leave employment with the Firm as follows:

- In the Americas: 60 days in advance of my termination date;
- In Europe, the Middle East, Africa and India: 90 days in advance of my termination date; and

- In Japan and Asia Ex-Japan (including Australia and New Zealand and excluding India): 90 days in advance of my termination date if I am a Vice President or an Executive Director; 60 days in advance of my termination date in all other cases.

If, under local law or my contract of employment (for example, a Managing Director Agreement), I have a notice requirement that is longer than those specified above, I understand that the longer notice period will apply. I also understand that if my employment is subject to a probation period, the Notice Policy applies only if notice of termination is given after the probation period has ended.

I understand that if I fail to comply in any respect with the Notice Policy, I will have failed to meet an obligation I have under an agreement with the Firm, as a result of which the Firm may have certain legal and equitable rights and remedies, including, without limitation, forfeiture of the Award(s) and any other awards granted to me under the SIP. The Firm may forfeit such Award(s) for violation of the Notice Policy irrespective of whether this agreement constitutes a legally recognized permanent change to my terms and conditions of employment, and irrespective of whether applicable law permits me to make a payment in lieu of notice. In addition, the Firm may seek an order or injunction from a court or arbitration panel to stop a breach and may also seek other permissible remedies. The Firm may hold me personally liable for any damages it suffers as a result of the breach.

This agreement concerning my notice period is being made for and on behalf of my Goldman Sachs employing entity, and implementation of the Notice Policy does not create an employment relationship between me and GS Inc.

3. I have read and understand the Firm's hedging and pledging policies (including, without limitation, the Firm's "Policies with Respect to Personal Transactions Involving GS Securities and GS Equity Awards"), and agree to be bound by them (with respect to the Award(s) and any prior awards under the SIP), both during and following my employment with the Firm.

4. As a condition to this grant, I agree to open and activate any brokerage, trust, sub-trust, custody or similar account (an "Account"), as required or approved by the Firm in its sole discretion. I agree to access, review, execute and be bound by any agreements that govern any such Account, including any provisions that provide for the applicable restrictions on transfers, pledges and withdrawals of Shares, permitting the Firm to monitor any such Account, and the limitations on the liability of the party (which may not be affiliated with the Firm) providing the Account and the Firm. I understand and agree that the Firm may direct the transfer of securities, cash or other assets in my Account to the Firm in connection with any indebtedness or any other obligation that I have to the Firm, as determined by the Firm in its sole discretion, however such obligation may have arisen. I also agree to open an Account with any other custodian, broker, trustee, transfer agent or similar party selected by the Firm, if the Firm, in its sole discretion, requires me to open an account with such custodian, broker, trustee, transfer agent or similar party as a condition to delivery of Shares underlying the Award (s).

5. If the Firm advanced or loaned me funds to pay certain taxes (including income taxes and Social Security, or similar contributions) in connection with the Award(s) (or does so in the future), and if I have not signed a separate loan agreement governing repayment, I authorize the Firm to withhold from my compensation any amounts required to reimburse it for any such advance or loan to the extent permitted by applicable law.

I understand and agree that, if I leave the Firm, I am required immediately to repay any outstanding amount. I further understand and agree that the Firm has the right to offset, to the extent permitted by the Award Agreement and applicable law (including Section 409A of the U.S. Internal Revenue Code of 1986, as amended, which limits the Firm's ability to offset in the case of United States taxpayers under certain circumstances), any outstanding amounts that I then owe the Firm against its delivery obligations under the Award(s), against any obligations to remove restrictions and/or other terms and conditions in respect of any Restricted Shares or Shares at Risk (each as defined in the applicable Award Agreement) or against any other amounts the Firm then owes me, including payments of dividends or dividend equivalent payments. I understand that the delivery of Shares pursuant to the Award(s) is conditioned on my satisfaction of any applicable taxes or Social Security contributions (collectively referred to as "tax" or "taxes" for purposes of the SIP and all related documents) in accordance with the SIP. To the extent permitted by applicable law, the Firm, in its sole discretion, may require me to provide amounts equal to all or a portion of any Federal, State, local, foreign or other tax obligations imposed on me or the Firm in connection with the grant, vesting or delivery of the Award(s) by requiring me to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise), (ii) in the form of proceeds from the Firm's executing a sale of Shares delivered to me pursuant to the Award (s) or (iii) as otherwise permitted in the Award Agreement(s)**.** However, in no event shall any such choice determine, or give me any discretion to affect, the timing of the delivery of Shares or payment of tax obligations.

6. In connection with any Award Agreement or other interest I may receive in the SIP or any Shares that I may receive in connection with the Award(s) or any award I have previously received or may receive, or in connection with any amendment or variation thereof or any documents listed in paragraph 7, I hereby consent to (a) the acceptance by me of the Award(s) electronically, (b) the giving of instructions in electronic form whether by me or the Firm, and (c) the receipt in electronic form at my email address maintained at Goldman Sachs or via Goldman Sachs' intranet site (or, if I am no longer employed by the Firm, at such other email address as I may specify, or via such other electronic means as the Firm and I may agree) all notices and information that the Firm is required by law to send to me in connection therewith including, without limitation, any document (or part thereof) constituting part of a prospectus covering securities that have been registered under the U.S. Securities Act of 1933, the information contained in any such document and any information required to be delivered to me under Rule 428 of the U.S. Securities Act of 1933, including,

for example, the annual report to security holders or the annual report on Form 10-K of GS Inc. for its latest fiscal year, and that all prior elections that I may have made relating to the delivery of any such document in physical form are hereby revoked and superseded. I agree to check Goldman Sachs' intranet site (or, if I am no longer employed by the Firm, such other electronic site as notified to me by the Firm) periodically as I deem appropriate for any new notices or information concerning the SIP. I understand that I am not required to consent to the receipt of such documents in electronic form in order to receive the Award(s) and that I may decline to receive such documents in electronic form by contacting , which will provide me with hard copies of such documents upon request. I also understand that this consent is voluntary and may be revoked at any time on three business days' written notice.

7. I hereby acknowledge that I have received in electronic form in accordance with my consent in paragraph 6 the following documents:

- The Goldman Sachs Amended and Restated Stock Incentive Plan (2018);
- Summary of The Goldman Sachs Amended and Restated Stock Incentive Plan (2018);
- The annual report on Form 10-K for The Goldman Sachs Group, Inc. for the fiscal year ended December 31, ;
- The Award Agreement(s); and
- Summaries of the Award(s) ("Award Summary").

8. I expressly authorize any appropriate representative of the Firm to make any notifications, filings or remittances of funds that may be required in connection with the SIP or otherwise on my behalf. Further, if I am an employee who is resident in South Africa at a relevant time, by accepting my Award(s), I expressly authorize any appropriate representative of the Firm to make any required notification on my behalf to the Financial Surveillance Department of the South African Reserve Bank (or its authorized dealer) in relation to my participation in the SIP and to any acquisition of Shares for no consideration under the SIP or other similar filing that may otherwise be required in South Africa. I acknowledge that any such authorization is effective from the date of acceptance of my Award(s) until such time as I expressly revoke the authorization by written notice to any appropriate representative of the Firm. I understand that this authorization does not create any obligation on the Firm to deal with any such notifications, filings or remittances of funds that I may be required to make in connection with the SIP and I accept full responsibility in this regard.

9. The granting of the Award(s), the delivery of the underlying Shares and any subsequent dividends or dividend equivalent payments, and the receipt of any proceeds in connection with the Award(s) may result in legal or regulatory requirements in some jurisdictions. I understand and agree that it is my responsibility to ensure that I comply with any legal or regulatory requirements in respect of the Award(s).

10. I confirm that I have filed all tax returns that I am required to file and paid all taxes I am required to pay with respect to awards previously granted to me by the Firm, and I agree, with respect to both the Award(s) as well as awards previously granted to me by the Firm, to file all tax returns I am required to file in connection with the Award(s) and any sales of any Shares or other property delivered pursuant to the Award(s) and to pay all taxes I am required to pay.

11. The goodwill associated with the relationships between the Firm and its clients and prospective clients is a valuable asset of the Firm that is built and preserved through the combined services and efforts of the Firm and all of its personnel. The Firm provides its employees with a unique platform of financial products and services, confidential and proprietary information, professional training, access to specialized expertise, research, analytical, operational, and business development support, travel and entertainment expenses and other valuable resources to build and enhance the goodwill associated with the relationships between the Firm and its clients, as well as to foster and establish such relationships with prospective clients. Accordingly, I acknowledge and agree that (i) because the Firm contributes valuable resources to build and enhance client relationships, including those for which I provide services, it has a legitimate and essential business interest in protecting the goodwill associated with those relationships; (ii) by my continued employment, I confirm that I have assigned and will assign to the Firm all goodwill I have developed or will develop with persons or entities with whom I interact while at the Firm and/or who are or will become clients or prospective clients of the Firm in connection with my employment with the Firm, even if I did business with such persons or entities prior to joining the Firm; and (iii) while at the Firm I do not have and will not acquire any property, proprietary, contractual or other legal right or interest whatsoever in or to any client or prospective client with whom I interact or conduct business while employed by the Firm or (except to the extent otherwise provided in a written agreement between the Firm and me that governs my compensation) to any current or prospective revenues associated with such client or prospective client (all such interests being referred to herein as "Intangible Interests"). For the avoidance of doubt, I am hereby assigning all Intangible Interests to the Firm. I acknowledge and agree that my compensation during the term of my employment with the Firm is adequate financial consideration in this regard, and that no further consideration is necessary (including in respect of obligations applicable to me after my employment with the Firm has ended).

12. I understand and agree that the terms of any award granted to me under the SIP or any predecessor plan that provide for accelerated vesting, delivery or transferability as a result of Conflicted Employment (as defined in the applicable Award Agreement) may be limited to the extent prohibited by applicable law or regulation.

Data Collection, Processing and Transfers:

Grantees residing outside of the European Economic Area (EEA): If I am located outside of the EEA, I consent to the processing of my personal data in accordance with the information set out below.

Grantees residing in the European Economic Area (EEA): If I am located in the EEA, my personal data will be processed in accordance with the information set out below and in the GS HCM – Fair Processing Notice which can be found at http://www.goldmansachs.com/notices/hcm-fpn.html. In the event of any inconsistency the GS HCM – Fair Processing Notice shall prevail over this section.

In connection with the SIP and any other Firm benefit plan (the "Programs"), to the extent permitted under the laws of the applicable jurisdiction, the Firm may collect, process, transfer/transmit (internationally and/or domestically), and use various data that is personal to me, and my data might be deemed sensitive personal data in certain jurisdictions, including but not limited to my name, address, work location, hire date, Social Security or Social Insurance or taxpayer identification number (required for tax purposes), type and amount of SIP or other benefit plan award, citizenship or residency (required for tax purposes) and other similar information reasonably necessary for the administration of such Programs (collectively referred to as "Information") and provide such Information to its affiliates , Computershare Limited and its affiliates (collectively "Computershare") and Fidelity Stock Plan Services, LLC, Fidelity Personal Trust Company, FSB and any of their affiliates (collectively "Fidelity") or any other service provider, whether in the United States or elsewhere, as is reasonably necessary for the administration of the Programs and under the laws of these jurisdictions. In certain circumstances, where required by law, foreign courts, law enforcement agencies or regulatory agencies may be entitled to access the Information. Unless I explicitly authorize otherwise, the Firm, its affiliates and its service providers (through their respective employees in charge of the relevant electronic and manual processing) will collect, process, transfer/transmit (internationally and/or domestically), and use this Information only for purposes of administering the Programs. In the United States and in other countries to which such Information may be transferred for the administration of the Programs, the level of data protection is not equivalent to data protection standards in the member states of the EEA, Switzerland, Canada or certain Canadian provinces or my home country and U.S. public authorities may potentially access such Information. If I am employed in Argentina, I have also read the text in bold in the respective Argentina legal notice below (the "Argentina Clause") in conjunction with this Data Collection, Processing and Transfers section, such text forms part of this section and that in the event of any inconsistency the Argentina Clause shall prevail over this section. Upon request to Equity Compensation (division of HCM), 200 West Street, 19th Floor, New York, NY 10282, telephone (212) 357-1444, email EquityCompensation@ny.email.gs.com, to the extent required under the laws of the applicable jurisdiction, I may have access to and obtain communication of the Information and may exercise any of my rights in respect of such Information, in each case free of charge, including objecting to the collecting, processing, (international and/or domestic) transfer/transmission, and any use of the Information and requesting that the Information be updated or corrected (if wrong), completed or clarified (if incomplete or equivocal), or erased (if cannot legally be collected or kept). Upon request, to the extent required under the laws of the applicable jurisdiction, Equity Compensation (division of HCM) will also provide me, free of charge, with a list of all the service providers used in connection with the Programs at the time of request. There is no legal obligation for me to provide the Firm with the Information and any Information is provided at my own will and consent. If I refuse to authorize the collecting, processing, use and (international and/or domestic) transfer/transmission of the Information consistent with the above, I may not benefit from the Programs. The collecting, processing, use and (international and/or domestic) transfer/transmission of the Information will be consistent with the above for the period of administration of the Programs. In particular (within the limits described above): (i) the Firm will process data (Firm means GS Inc. and any of its subsidiaries and affiliates); (ii) Fidelity or Computershare will process data; (iii) the Firm's other service providers will process data; and (iv) data will be transferred to the United States and other countries, as described above for the purposes set forth herein. A list of the Firm's international offices and countries to which data that is personal to me can be transferred is set forth at http://www2.goldmansachs.com/who-we-are/locations/index.html. The Information may be retained by the aforementioned persons beyond the period of administration of the Programs to the extent permitted under the laws of the applicable jurisdiction.

Other Legal Notices:

In addition, by accepting (whether expressly or by implication) any benefit granted to you by the Firm, including without limitation your Award(s), you acknowledge and agree to each of the following:

- ***No Public Offer:*** Awards under the SIP and the Firm's other compensation and benefit programs are strictly limited to eligible participants and are not intended to constitute a public offer in any jurisdiction, nor intended for registration in any jurisdiction outside of the U.S. You should keep all Award-related documents confidential and you may not reproduce, distribute or otherwise make public any part of such documents without the Firm's express written consent. If you have received any such documents and you are not the intended recipient, please disregard and destroy them.

- ***Transferability:*** Any provisions permitting transfers to a third party in the Award documents will not apply to you (i) to the extent that the applicability of those provisions would affect the availability of relevant exemptions or tax favorable treatment, or (ii) otherwise in circumstances determined by the Firm in its sole discretion from time to time.
- ***Adequate Information:*** You acknowledge that you (i) have been provided with all relevant information and materials with respect to the Firm's operations and financial conditions and the terms and conditions of your Award(s), (ii) have read and understood such information and materials, (iii) are fully aware and knowledgeable of the terms and conditions of your Award(s), and (iv) completely and voluntarily agree to the terms and conditions of your Award(s).
- ***Independent Advice Recommended:*** The information provided by the Firm or its service providers in respect of an Award does not take into account the individual circumstances of recipients and does not constitute investment advice. Awards under the SIP involve certain risks and you should exercise caution. The Firm recommends that you consult your own independent legal, financial and tax advisors in all cases, and you acknowledge that you are provided with adequate opportunity to do so.
- ***No Employer Involvement:*** Except to the extent required by applicable law, all Awards are offered, issued and administered by GS Inc., a Delaware corporation, and your employer (if it is not GS Inc.) is not involved in the grant of your Award(s) or any other GS Inc. equity compensation. All documents related to the Awards, including the SIP, the Award Agreement, this Signature Card and the link by which you access these documents, are originated and maintained in the United States.
- ***No Effect on Employment-Related Rights:*** Any compensation you receive (even on a regular and repeated basis) in connection with the SIP is discretionary and does not constitute part of your base or normal salary or wages. It does not affect your rights and obligations under the terms of your employment and it will not be taken into account (except to the extent otherwise required by applicable law) in determining any other employment-related rights you may have, including without limitation rights in relation to severance, redundancy or end-of-service payments, bonuses, long-service awards, pension or retirement benefits. In particular you waive any and all rights to compensation or damages in consequence of the termination of your employment for any reason whatsoever insofar as those rights arise or may arise from your ceasing to have rights under, or be entitled to receive payment in respect of, the SIP as a result of such termination, or from the loss or diminution in value of such rights or entitlements. This waiver applies whether or not such termination amounts to wrongful or unfair dismissal.
- ***No Additional Entitlements:*** The grant of an Award is strictly discretionary and voluntary and neither this Award (even if Award grants are made to you on a regular and repeated basis) nor your employment contract implies any expectation or right in relation to (i) the grant of any Award or similar compensation in the future, (ii) the terms, conditions and amount of any Award or similar compensation that the Firm may decide to grant in future, or (iii) continued employment in connection with any Award.
- ***Translations:*** The official Award documents (including contracts and communications) are in the English language. You are responsible for ensuring that you fully understand these documents. The English version of the documents will always prevail in the event of any inconsistency with translated or interpreted documents.
- ***Severability:*** If any provision (in whole or in part) of this Signature Card or the other Award documents is to any extent illegal, otherwise invalid, or incapable of being enforced, that provision will be excluded to the extent (only) of such invalidity or unenforceability. All other provisions will remain in full effect and, to the extent possible, the invalid or unenforceable provision will be deemed replaced by a provision that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable provision.
- ***Country-Specific Legal Notices:*** You have read the country-specific legal notices below that pertain to your place of employment and/or residence (and also the location of your employer, if different), if any, and understand that they apply throughout the term of your Award(s).

[NON-COMPETITION AND NON-SOLICITATION RESTRICTIONS FOR EMPLOYEES PROVIDING SERVICES IN ASIA

In addition to and without limiting any provisions in the SIP or the applicable Award Agreement(s) (including without limitation the Award vesting, delivery, forfeiture, termination or repayment provisions) unless provided otherwise in the Restrictions, if I am providing services to the Firm in Asia or to BGH, in view of my importance to the Firm and/or BGH, I hereby agree to and acknowledge the following:

(a) I hereby agree that the Firm or BGH would likely suffer significant harm if I associate with a Covered Enterprise during my employment and for some period of time after my employment ends. Accordingly, I hereby agree that I will not, without the written consent of the Firm or BGH, during the Restricted Period in the Geographic Area:

(i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise; or

(ii) associate (including, but not limited to, association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise and in connection with such association engage in, or directly or indirectly manage or supervise personnel engaged in, any activity:

A. which is similar or substantially related to any activity in which I was engaged, in whole or in part, at the Firm or BGH,

B. for which I had direct or indirect managerial or supervisory responsibility at the Firm or BGH, or

C. which calls for the application of the same or similar specialized knowledge or skills as those utilized by me in my activities with the Firm or BGH,

each such activity being determined with reference to the one-year period immediately prior to the end of the Asia Service Period, and, in each such case, irrespective of the purpose of the activity or whether the activity is or was in furtherance of advisory, agency, proprietary or fiduciary business of either the Firm or BGH or the Covered Enterprise.

(By way of example only, this provision precludes an "advisory" investment banker from joining a leveraged-buyout firm, a research analyst from becoming a proprietary trader or joining a hedge fund, or an information systems professional from joining a management or other consulting firm and providing information technology consulting services or advice to any Covered Enterprise, in each case without the written consent of the Firm or BGH.)

(b) I hereby agree that during the Restricted Period, I will not, in any manner, directly or indirectly, (1) Solicit a Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm or BGH, or (2) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm or BGH and a Client.

(c) I hereby agree that during the Restricted Period, I will not, in any manner, directly or indirectly:

(i) Solicit any Selected Firm Personnel to resign from the Firm or BGH;

(ii) Solicit any Selected Firm Personnel to apply for or accept employment (or other association) with any person or entity other than the Firm; or

(iii) hire or participate in the hiring of any Selected Firm Personnel (whether as an employee, consultant or otherwise) by any person or entity other than the Firm, including, without limitation, participating in the identification of individuals for potential hire, and participating in any hiring decision.

I acknowledge and agree that I will have violated this provision if, during the Restricted Period, any Selected Firm Personnel are Solicited or hired:

(i) by any entity which I form, which bears my name, or in which I possess or control greater than a de minimis equity ownership, voting or profit participation; or

(ii) by any entity where I have, or will have, direct or indirect managerial responsibility for such Selected Firm Personnel.

(d) I acknowledge and agree that these Restrictions form part of my terms and conditions of employment. I also acknowledge and agree that these Restrictions supersede any part of any other agreement (which, for the avoidance of doubt, excludes the SIP and the Award Agreement(s)), written or oral, that I am subject to in respect of the same subject matter unless I am notified in writing to the contrary.

(e) Prior to accepting employment with any other person or entity during the Restricted Period, I will provide any prospective employer with written notice of the Restrictions with a copy containing the prospective employer's name and contact information delivered simultaneously to the Firm.

(f) I understand that the Restrictions may limit my ability to earn a livelihood in a business similar to the business of the Firm or BGH. I acknowledge that a violation on my part of any of the Restrictions would cause immeasurable and irreparable damage to the Firm or BGH. Accordingly, I agree that the Firm and/or BGH will be entitled to injunctive relief in any court of competent jurisdiction for any actual or threatened violation of any of the Restrictions in addition to any other remedies it or they may have. In the event that I violate any of the Restrictions, I acknowledge that the Restricted Period shall automatically be extended by the period of time that I was in violation of the said Restriction(s). I also acknowledge that a violation of any of the Restrictions would constitute my failure to meet an obligation I have under an agreement between me and the Firm that was entered into in connection with my employment with the Firm and/or BGH, may be detrimental to the Firm and/or BGH and would constitute "Cause" for purposes of any equity-based awards granted to me by the Firm and/or BGH and will result in my forfeiting such equity-based awards.

(g) If any provision (or part of a provision) of the Restrictions is held by a court of competent jurisdiction to be invalid, illegal or unenforceable (whether in whole or in part), such provision will be deemed modified to the extent, but only to the extent, of such invalidity, illegality or unenforceability and the remaining such provisions will not be affected thereby; provided, however, that if any of the Restrictions are held by a court of competent jurisdiction to be invalid, illegal or unenforceable because it exceeds the maximum time period such court determines is acceptable to permit such provision to be enforceable, such Restrictions will be deemed to be modified to the minimum extent necessary to modify such time period in order to make such provision enforceable hereunder.

(h) The promises contained in the Restrictions are provided by me for the benefit of each Firm entity and BGH and I acknowledge and agree that each such entity may independently enforce the Restrictions against me. Any benefit that I give or am deemed to have given by virtue of the Restrictions is received jointly and severally by each Firm entity (including, for the avoidance of doubt, any Firm entity to which I provide services from time to time) and BGH.

(i) For the purposes of the Restrictions, GS Inc. enters into the SIP and Award Agreement(s) applicable to me in connection with the Award(s) in its own capacity and as agent for each other Firm entity and BGH. The consideration for the promises in these Restrictions is given to me by GS Inc. on its own behalf and on behalf of each other Firm entity (including, for the avoidance of doubt, any Firm entity to which I provide services from time to time) and BGH.

(j) I acknowledge that the Restrictions set out in this clause are reasonable and necessary for the protection of the legitimate interests of the Firm and/or BGH, and that, having regard to those interests, such restrictions do not impose an unreasonable burden on me.

(k) The Restrictions shall remain in full force and effect and survive the termination of my employment for any reason whatsoever.

(l) If I am subject to the Non-Competition and Non-Solicitation Agreement for Select Employees in the Equities Division, or a Managing Director subject to a Goldman Sachs Group, Inc. Managing Director Agreement, the Restrictions shall not apply to me.

(m) If I am a Private Wealth Management employee subject to an Employee Agreement Regarding Confidential and Proprietary Information and Materials and Non-Solicitation, I will be subject to the restrictions contained in clause (a) of the Restrictions but will not be subject to the restrictions contained in clauses (b) and (c) of the Restrictions. Nothing in the Restrictions will affect the operation of the Employee Agreement Regarding Confidential and Proprietary Information and Materials and Non-Solicitation.

(n) For the purposes of the Restrictions only, the following terms have the following meanings:

"Asia" means each state and territory in Australia, Brunei, Hong Kong SAR, India, Indonesia, Japan, Korea, Labuan, Macau SAR, Malaysia, Mongolia, New Zealand, Papua New Guinea, the Philippines, the PRC, Singapore, Taiwan, Thailand and Vietnam.

"Asia Service Period" means the period during which I am located in Asia and contracted to provide services to a member of the Firm in Asia or BGH. For the avoidance of doubt, the Asia Service Period does not end when I transfer to another member of the Firm in Asia or BGH.

"BGH" means Beijing Gao Hua Securities Company Limited, its subsidiaries and affiliates, and its or their respective successors.

"*Client*" means any client or prospective client of the Firm or BGH (i) to whom I provided services at any time during the one year period immediately prior to the end of the Asia Service Period, or (ii) for whom I transacted business or solicited at any time during the one year period immediately prior to the end of the Asia Service Period, or (iii) whose identity became known to me in connection with my employment by the Firm or BGH at any time during the one year period immediately prior to the end of the Asia Service Period.

"Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm or BGH is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than me and members of my family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

"Covered Enterprise" means a Competitive Enterprise and any other existing or planned business enterprise that: (i) offers, holds itself out as offering or reasonably may be expected to offer products or services that are the same as or similar to those offered by the Firm or BGH or that the Firm or BGH reasonably expects to offer ("Firm Products or Services") or (ii) engages in, holds itself out as engaging in or reasonably may be expected to engage in any other activity that is the same as or similar to any financial activity engaged in by the Firm or BGH or in which the Firm or BGH reasonably expects to engage ("Firm Activities"). For the avoidance of doubt, Firm Activities include any activity that requires the same or similar skills as any financial activity engaged in by the Firm or BGH or in which the Firm or BGH reasonably expects to engage, irrespective of whether any such financial activity is in furtherance of an advisory, agency, proprietary or fiduciary undertaking.

The enterprises covered by this definition include enterprises that offer, hold themselves out as offering or reasonably may be expected to offer Firm Products or Services, or engage in, hold themselves out as engaging in or reasonably may be expected to engage in Firm Activities directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by or by being under common ownership with an enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services or that engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities). The definition of Covered Enterprise includes, solely by way of example, any enterprise that offers, holds itself out as offering or reasonably may be expected to offer any product or service, or engages in, holds itself out as engaging in or reasonably may be expected to engage in any activity, in any case, associated with investment banking; public or private finance; lending; financial advisory services; private investing for anyone other than me or members of my family (including, for the avoidance of doubt, any type of proprietary investing or trading); private wealth management; private banking; consumer or commercial cash management; consumer, digital, or commercial banking; merchant banking;

asset, portfolio or hedge fund management; insurance or reinsurance underwriting or brokerage; property management; or securities, futures, commodities, energy, derivatives, currency or digital asset brokerage, sales, lending, custody, clearance, settlement or trading. An enterprise that offers, holds itself out as offering or reasonably may be expected to offer Firm Products or Services, or engages in, holds itself out as engaging in or reasonably may be expected to engage in Firm Activities is a Covered Enterprise**, irrespective of whether the enterprise is a customer, client or counterparty of the Firm or BGH or is otherwise associated with the Firm or BGH and, because each of the Firm and BGH is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

"Covered Extended Absence" means my absence from active employment for at least 180 days in any 12-month period as a result of my incapacity due to mental or physical illness, as determined by the Firm or BGH (as applicable).

"Effective Date" means (i) if the termination is for cause or Covered Extended Absence, the date on which such termination occurs; or (ii) if I repudiate my employment contract, the date of repudiation as determined by the Firm or BGH (as applicable).

"Firm" means GS Inc., its subsidiaries and affiliates and its and their respective successors.

"Geographic Area" means (i) the jurisdiction in Asia in which I am located as of the date of execution of the Signature Card; and/or (ii) any other jurisdiction in Asia in relation to which I have substantial product and/or geographical market responsibilities in the one year period immediately prior to the end of the Asia Service Period; and/or (iii) any other jurisdiction in Asia in relation to which I have substantial employee managerial responsibilities in the one year period immediately prior to the end of the Asia Service Period; and/or (iv) any other jurisdiction in Asia in relation to which I provided services in the one year period immediately prior to the end of the Asia Service Period.

"PRC" means, for the purpose of the Restrictions, the People's Republic of China, excluding Hong Kong SAR, Macau SAR and Taiwan.

"Restricted Period" means (i) in the event of the termination of my employment with the Firm in Asia or BGH, the Asia Service Period including any notice period applicable under the Notice Policy or, in the event I repudiate my notice requirement or exercise any statutory right to shorten the notice period or if my employment is terminated without notice or if the Firm elects to shorten the notice period in whole or in part with or without pay in lieu for any period of notice that has been waived or reduced, the Asia Service Period and the period of time equivalent to my notice requirement commencing from the Effective Date; or (ii) in the event of my employment with the Firm in Asia or BGH ending by reason of the transfer of my employment to another member of the Firm outside Asia, the Asia Service Period and the period of time equivalent to my notice requirement commencing from the conclusion of the Asia Service Period; or (iii) in the event of the termination of my secondment to the Firm in Asia or BGH and assignment or transfer of my employment to another member of the Firm outside Asia, the Asia Service Period and the period of time equivalent to my notice requirement commencing from the conclusion of the Asia Service Period.

"Restrictions" means the non-competition and non-solicitation restrictions for employees providing services in Asia as set out in (a) to (o) of this section of the Signature Card.

"Selected Firm Personnel" means any individual who is, or in the three months preceding the conduct prohibited by (c) of this section of the Signature Card was (i) a Firm or BGH employee or consultant with whom I have personally worked with while employed by the Firm; (ii) a Firm or BGH employee or consultant who, at any time during the one-year period immediately prior to the end of the Asia Service Period, worked in the same division in which I worked; or (iii) an Advisory Director, a Managing Director, or a Senior Advisor of the Firm.

"Solicit" means making any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, suggesting, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(o) Notwithstanding paragraph 1 of this Signature Card, the Restrictions shall be governed by and construed in accordance with the laws of the jurisdiction in which I am located and providing services to the Firm at the date of execution of the Signature Card. If I am located and providing services to the Firm in a state or territory in Australia, the laws of the jurisdiction shall be New South Wales. Notwithstanding paragraph 1, any Firm entity (including, for the avoidance of doubt, any Firm entity to which I provide services from time to time) or BGH may at any time elect to enforce the Restrictions in any competent court of any jurisdiction determined by such entity.]

FOR ARGENTINA EMPLOYEES ONLY

Your Award(s) are being offered to you in your capacity as an employee of the Firm. By receiving and accepting your Award(s), you are deemed to (i) acknowledge that the underlying Shares have not been authorized by the Argentine *Comisión Nacional de Valores* ("CNV") to be publicly offered in Argentina; and (ii) agree that you will not sell or offer to sell any Shares acquired upon settlement of your Award(s) in Argentina other than pursuant to transactions that would not qualify as a public offering under article 2 of Argentine Law 26,831.

The Award documents are being delivered to you in your capacity as an employee of the Firm. Accordingly, receipt and acceptance of the Award documents constitute your agreement that the information contained in the Award documents may not (i) be reproduced or used, in whole or in part, for any purpose

whatsoever other than as a representation of your holding of Shares, or (ii) furnished to or discussed with any person (other than your personal advisors on a confidential basis) without the express written permission of GS Inc.

You acknowledge that the Access to Public Information Agency, as the enforcing authority of Act 25.326, has the power to attend the reports and claims from those who are affected in their rights consequence of non-fulfilment of data protection provisions. (La Agencia de Acceso a la Información Pública, en su carácter de Órgano de Control de la Ley Nº 25.326, tiene la atribución de atender las denuncias y reclamos que interpongan quienes resulten afectados en sus derechos por incumplimiento de las normas vigentes en materia de protección de datos personales.)

Additional data protection information for Argentina employees (which should be read in conjunction with, and forms part of, the Data Collection, Processing and Transfers section above):

You understand that your data may be stored in a database duly registered with the Argentine National Data Protection Agency, under the name and responsibility of GS Inc. or one of its subsidiaries or affiliates.

FOR AUSTRALIA EMPLOYEES ONLY

GS Inc. undertakes that it will, within a reasonable period of you so requesting and at no charge, provide you with a copy of the rules of the SIP. The market price of a Share can be accessed at the following link: https://www.nyse.com/index. The Australian dollar equivalent of that market price can be ascertained by applying the prevailing USD/AUD exchange rate published by the Reserve Bank of Australia, which can be accessed at the following link: http://www.rba.gov.au/statistics/frequency/exchange-rates.html.

Any advice given by GS Inc. in connection with the SIP is general advice only. The documentation does not take into account the objectives, financial situation or needs of any particular person. Before acting on the information contained in the documentation, or making a decision to participate, you should consider obtaining your own financial product advice from a person who is licensed by the Australian Securities and Investments Commission (ASIC) to give such advice.

Throughout the period in which you hold a dividend equivalent right you may obtain copies of all information filed by GS Inc. with the U.S. Securities and Exchange Commission (SEC) which is accessible by GS Inc.'s shareholders and the general public ("shareholder information") by going to the SEC's website (www.sec.gov) or to the GS Inc. website (www.gs.com), and at http://www.goldmansachs.com/investor-relations/financials/. You should be aware that shareholder information can affect the value of your dividend equivalent rights from time to time. The actual value you receive in respect of the Shares acquired by you will depend on the number of Shares you receive, the market value of a Share, the value of any dividend and dividend equivalent payments made in respect of a Share, and the USD/AUD exchange rate.

There are risks associated with an investment in Shares and the value of any Shares you receive may be less than the value of those Shares today. Some of those risks are specific to GS Inc.'s business activities while others are of a more general nature. For more detail on those risks, please refer to GS Inc.'s most recent annual report. Individually or in combination, those risks may affect the value of Shares.

Fidelity Personal Trust Company, FSB ("Trustee") will hold Shares that are the subject of Award(s). Any Shares, and income gained, held on your behalf may only be dealt with by the Trustee with your direction. You may direct the Trustee on the exercise of any applicable voting rights that you hold in respect of such Shares. GS Inc. undertakes that it will, within a reasonable period of you so requesting and at no charge, provide you with a copy of the trust deed.

FOR BRAZIL EMPLOYEES ONLY

The Award(s) referred to in this document and the underlying Goldman Sachs shares have not been and will not be publicly issued, placed, distributed, offered or negotiated in the Brazilian capital markets and, as a result, will not be registered with the Brazilian Securities Commission (Comissão de Valores Mobiliários). The Award(s) and the underlying Goldman Sachs shares will not be offered or sold in Brazil under any circumstances that constitute a public offering, placement, distribution or negotiation under the Brazilian capital markets regulation.

By accepting the Award(s), you agree and acknowledge that (i) neither your employer nor any person or entity acting on behalf of your employer has provided you with financial advice with respect to your Award(s) or the shares acquired upon settlement of your Award(s); and (ii) your employer does not guarantee a specified level of return on your Award(s) or the registered shares.

According to Brazilian regulations, individuals resident in Brazil must inform the Central Bank of Brazil yearly the amounts of any nature, the assets and rights (including cash and other deposits) held outside of the Brazilian territory. Please consult your own legal counsel on the terms and conditions for presentation of such information.

By accepting the Award(s), you acknowledge that the Firm has provided you with Portuguese translations of the Award Summary, Award Agreement and Signature Card, but that the original English versions of these documents control. (Ao aceitar esta outorga, Você reconhece que a Empresa Ihe disponibilizou a versão em português do Award Summary, do Award Agreement e do Signature Card; porém a versão original em inglês desses documentos prevalecerá.)

FOR CHILE EMPLOYEES ONLY

Neither GS Inc., the SIP nor the Shares have been registered in the *Registro de Valores* (Securities Registry) or in the *Registro de Valores Extranjeros* (Foreign Securities Registry) of the *Comisión para el Mercado Financiero* (Chilean Commission for Financial Market or CMF) and they are not subject to the control of the CMF. If such securities are offered within Chile, they will be offered and sold only pursuant to *Norma de Carácter, General 336* (General Regulation 336) of the CMF, an exemption to the registration requirements, or in circumstances which do not constitute a public offer of securities in Chile within the meaning of Article 4 of the Chilean Securities Market Law 18,045. As the Shares are not registered, the issuer has no obligation under Chilean law to deliver public information regarding the Shares in Chile. The Shares shall not be subject to public offering in Chile unless they are registered in the Foreign Securities Registry of the CMF. The commencement date of the offer is the date on which these documents were first provided to you via email.

You declare that you read and understand English and the fact that the official plan documents are in the English language does not represent any inconvenience or prejudice to you. If you do not understand their content, please contact your HR contact in order to obtain a Spanish version.

Ni GS Inc., ni el SIP, ni las Acciones, han sido registradas en el Registro de Valores o Registro de Valores Extranjeros que lleva la Comisión para el Mercado Financiero (CMF) y ninguno de ellos está sujeto a la fiscalización de la CMF. Si dichos valores son ofrecidos dentro de Chile, serán ofrecidos y colocados sólo de acuerdo a la Norma de Carácter General 336 de la CMF, una excepción a la obligación de registro, o en circunstancias que no constituyan una oferta pública de valores en Chile según lo definido por el Artículo 4 de la Ley 18.045 de Mercado de Valores de Chile. Por tratarse de valores no inscritos, el emisor de las Acciones no tiene obligación bajo la ley chilena de entregar en Chile información pública acerca de las Acciones. Las Acciones no pueden ser ofrecidas públicamente en Chile en tanto éstas no se registren en el Registro de Valores Extranjeros de la CMF. Se informa que la fecha de inicio de la presente oferta será aquella en que estos documentos fueron entregados a usted por primera vez vía email.

Usted declara que lee y entiende el idioma inglés, de manera que el hecho de que los documentos oficiales del Plan se encuentran en idioma inglés no representa ningún inconveniente o perjuicio para usted. En caso que usted no entienda el contenido de estos documentos, por favor comuníquese con su encargado de recursos humanos, a fin de obtener una versión en español.

FOR THE PEOPLE'S REPUBLIC OF CHINA EMPLOYEES ONLY

All documentation in relation to the Award(s) is intended for your personal use and in your capacity as an employee of the Firm (and/or its affiliate) and is being given to you solely for the purpose of providing you with information concerning the Award(s) which the Firm may grant to you as an employee of the Firm (and/or its affiliate) in accordance with the terms of the SIP, this documentation and the applicable Award Agreement(s). The grant of the Award(s) has not been and will not be registered with the China Securities Regulatory Commission of the People's Republic of China pursuant to relevant securities laws and regulations, and the Award(s) may not be offered or sold within the mainland of the People's Republic of China by means of any of the documentation in relation to the Award(s) through a public offering or in circumstances which require a registration or approval of the China Securities Regulatory Commission of the People's Republic of China in accordance with the relevant securities laws and regulations.

You agree that notwithstanding anything to the contrary under the SIP or the Award Agreement(s), the Award(s) may be settled in cash in Renminbi or such other currency, payable by your employing entity in the mainland of the People's Republic of China or such other entity, in each case, as may be determined by the Firm in its sole discretion.

FOR FRANCE EMPLOYEES ONLY

Disclaimer: The current Award(s) is not covered by any prospectus which is the subject of the AMF's approval. Grantees can only receive this award for their own account ("compte propre") in the conditions laid down by articles L. 411-2, D. 411-1, D. 411-4, D. 744-1, D. 754-1 and D. 764-1 of the French Monetary and Financial Code. Any direct or indirect dissemination into the public of the financial instruments acquired can only take place within the conditions of articles L. 411-1, L. 411-2, L. 412-1 and L. 621-8 to L. 621-8-3 of the French Monetary and Financial Code.

By accepting the Award(s), you acknowledge that the Firm has provided you with French translations of the Award Summary, Award Agreement and Signature Card, but that the original English versions of these documents control.

The provisions of the Award Agreement will apply only in respect of the year to which the Award Agreement relates and will not in any circumstances create any right or entitlement to you for any future fiscal years.

Avertissement: La présente attribution ne donne pas lieu à un prospectus soumis au visa de l'Autorité des marchés financiers. Les personnes qui y participent ne peuvent le faire que pour compte propre dans les conditions fixées par les articles L. 411-2, D. 411-1,D.411-4, D. 744-1, D. 754-1 et D. 764-1 du Code monetaire et financier. La diffusion, directe ou indirecte, dans le public des instruments financiers ainsi acquis, ne peut être réalisée que dans les conditions prévues aux articles L. 411-1, L. 411-2, L. 412-1 et L. 621-8 à L. 621-8-3 du Code monétaire et financier.

En acceptant cet octroi, vous reconnaissez que la Société vous a transmis une version française de l'*Award Summary* (Résumé de l'Octroi), l'*Award Agreement* (Contrat d'Octroi) et de la *Signature Card* (Carte de Signature), mais que seule la version originale en langue anglaise fait foi.

Les dispositions de l'Accord de prime s'appliquent uniquement à l'année concernée par l'Accord de prime et ne créent en aucune circonstance tous droits ou habilitations s'agissant des années fiscales à venir.

FOR GERMANY EMPLOYEES ONLY

The Award(s) are offered to you by GS Inc. in accordance with the terms of the SIP which are summarized in the Award Summary. More information about GS Inc. is available on www.gs.com. You are being offered the Award(s) under the SIP in order to provide an additional incentive and to encourage employee share ownership and so increase your interest in the Firm's success. Please refer to the section entitled *Shares Available for Awards* in the SIP for information on the maximum number of GS Inc. shares that can be offered under the SIP. The obligation to publish a prospectus under the Prospectus Directive does not apply to the offer because of Article 4(1)(e) of that directive. This document is not a prospectus within the meaning of that directive.

Die Prämien werden Ihnen von der GS Inc. nach den in der Prämienübersicht aufgeführten Bestimmungen des Erwerbsplans angeboten. Weitere Informationen über GS Inc. finden Sie unter www.gs.com. Die Prämien werden Ihnen im Rahmen des Erwerbsplans zu Ihrer Motivation angeboten und um Sie durch das Halten von Aktien am Erfolg des Unternehmens teilhaben zu lassen. Informationen zur Anzahl der im Rahmen des Plans angebotenen GS Inc.-Aktien entnehmen Sie bitte dem Abschnitt *Shares Available for Awards* (Als Prämien erhältliche Aktien) im Erwerbsplan. Es besteht auf Grund von Artikel 4(1)(e) der Prospektrichtlinie für dieses Angebot keine Verpflichtung zur Veröffentlichung eines Emissionsprospekts. Dieses Dokument ist kein Prospekt im Sinne dieser Richtlinie.

FOR HONG KONG EMPLOYEES ONLY

WARNING:

The contents of this document have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to this Award(s). If you are in doubt about any of the contents of this document, you should obtain independent professional advice.

This document has not been, and will not be, registered as a "prospectus" in Hong Kong under the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap 32) nor has it been authorised by the Securities and Futures Commission in Hong Kong pursuant to the Securities and Futures Ordinance (Cap 571) of the Laws of Hong Kong. This document does not constitute an offer or invitation to the public in Hong Kong to acquire any securities nor an advertisement of securities in Hong Kong. This document is distributed on a confidential basis.

By accepting the Award(s), you acknowledge and agree that you will not be permitted to transfer awards to persons who fall outside the definition of 'qualifying persons' in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap 32) (i.e., a person who is not a current or former director, employee, officer, consultant of the Firm or a person other than the offeree's wife, husband, widow, widower, child or step-child under the age of 18 years, or as otherwise defined), even if otherwise permitted under the SIP or any of the related documents.

FOR INDIA EMPLOYEES ONLY

This website does not invite offers from the public for subscription or purchase of the securities of any body corporate under any law for the time being in force in India. The website is not a prospectus under the applicable laws for the time being in force in India. GS Inc. does not intend to market, promote, invite offers for subscription or purchase of the securities of any body corporate by this website. The information provided on this website is for the record only. Any person who subscribes or purchases securities of any body corporate should consult his own investment advisors before making any investments. GS Inc. shall not be liable or responsible for any such investment decision made by any person.

FOR INDONESIA EMPLOYEES ONLY

By accepting the Award(s), you acknowledge that the Firm has provided you with Bahasa Indonesia translations of the Award Summary, Award Agreement and Signature Card, but that the original English versions of these documents control.

Dengan menerima Putusan, Anda menyatakan bahwa Perusahaan telah memberikan Anda terjemahan Bahasa Indonesia dari Ikhtisar Putusan, Perjanjian Putusan dan Perjanjian dengan Tanda Tangan, tapi versi asli dalam Bahasa Inggris dari dokumen-dokumen ini tetap mengendalikan.

FOR ITALY EMPLOYEES ONLY

No person resident or located in Italy other than the original recipients of this document and any other document related to the Award(s) may rely on such documents or their content. The offer of the Award(s) under the SIP (and the delivery of underlying Shares) is exempted from prospectus requirements under Italian securities legislation.

Under Italian rules, Italian taxpayers generally must report in their annual tax return the value of any financial instruments held abroad at year-end (such as financial and real estate assets). Please consult your own advisors regarding the terms and conditions of this reporting obligation.

FOR MONACO EMPLOYEES ONLY

If you are a Monégasque national (or if otherwise applicable), by accepting your Award(s), you expressly renounce the jurisdiction of Monaco and notably the application of articles 3.2° and 5bis of the Monégasque Procedural Civil Code in connection with any dispute relating to your Award(s).

If you are a French national (or if otherwise applicable), by accepting your Award(s), you expressly renounce the jurisdiction of France and notably the application of articles 14 and 15 of the French Civil Code in connection with any dispute relating to your Award(s).

FOR NEW ZEALAND EMPLOYEES ONLY

GS Inc. is offering you awards under the SIP in reliance upon clause 8 of Schedule 1 of the Financial Markets Conduct Act 2013 (offers under employee share purchase schemes) (**Exclusion**). In accordance with the requirements of the Exclusion, the following information has been made available to you:

1. GS Inc.'s most recent annual report on http://www2.goldmansachs.com/our-firm/investors/financials/index.html.
2. The SIP documentation (which constitutes the current rules of the employee share purchase scheme for the purposes of the Exclusion) on https://hcm.web.gs.com/newaward.
3. A copy of the Award Agreement on https://hcm.web.gs.com/newaward.
4. GS Inc.'s most recent published audited and unaudited financial statements on http://www2.goldmansachs.com/our-firm/investors/financials/index.html.
5. A copy of the auditor's report on the above financial statements (if any) at http://www2.goldmansachs.com/our-firm/investors/financials/index.html.

You may request copies of the documents listed above free of charge from Head of Securities Compliance – Goldman Sachs Australia Pty Ltd.

Warning

The Award(s) constitute an offer of shares (although the Award may in limited circumstances be settled in cash or other property). The shares give you a stake in the ownership of GS Inc. You may receive a return if dividends are paid.

If GS Inc. runs into financial difficulties and is wound up, you will be paid only after all creditors have been paid. You may lose some or all of your investment.

New Zealand law normally requires people who offer financial products to give information to investors before they invest. This information is designed to help investors to make an informed decision.

The usual rules do not apply to this offer because it is made under an employee share purchase scheme. As a result, you may not be given all the information usually required. You will also have fewer other legal protections for this investment.

Ask questions, read all documents carefully, and seek independent financial advice before committing yourself.

The shares are quoted on a stock exchange. GS Inc. intends to quote these shares on the New York Stock Exchange (**NYSE**). This means you may be able to sell them on the NYSE if there are interested buyers. You may get less than you invested. The price will depend on the demand for the shares.

For further information, including the form, dividend payments, vesting, delivery, and transfer restrictions of the Award, please refer to the information provided in the above legend.

FOR POLAND EMPLOYEES ONLY

The Award(s) are offered to you by GS Inc. in accordance with the terms of the SIP which are summarized in the Award Summary. More information about GS Inc. is available on www.gs.com. You are being offered Award(s) under the SIP in order to provide an additional incentive and to encourage employee share ownership and so increase your interest in the Firm's success. Please refer to the section entitled *Shares Available for Awards* in the SIP for information on the maximum number of GS Inc. shares that can be offered under the SIP. The obligation to publish a prospectus under the 2003/71 Prospectus Directive and Polish Act of 29 July 2005 on Public Offer does not apply to the offer because of Article 3(2)(b) of that directive and Article 3 sec. 1 of that act.

The Goldman Sachs Group, Inc. („GS Inc.") przyznaje Państwu Premię (Premie) zgodnie z warunkami Motywacyjnego Programu Akcji Pracowniczych opisanymi w Ogólnych Warunkach Przyznania Premii. Więcej informacji na temat GS Inc. można uzyskać na stronie www.gs.com. Oferowana Państwu na podstawie Motywacyjnego Programu Akcji Pracowniczych Premia ma stanowić dodatkową motywację i rozwijać akcjonariat pracowniczy a w konsekwencji zwiększyć Państwa zaangażowanie w sukces Firmy. Prosimy zapoznać się z działem zatytułowanym Akcje dostępne w ramach Premii w Motywacyjnym Programie Akcji Pracowniczych, w celu uzyskania informacji na temat maksymalnej liczby akcji GS Inc. oferowanych na podstawie Motywacyjnego Programu Akcji Pracowniczych. Obowiązek publikowania prospektu wynikający z Dyrektywy w Sprawie Prospektu Emisyjnego 2003/71 oraz Ustawy z dnia 29 lipca 2005 r. o Ofercie Publicznej nie ma zastosowania do niniejszej oferty, ze względu na brzmienie art. 3 ust. 2 lit. (b) wskazanej powyżej dyrektywy oraz art. 3 ust. 1 powyższej Ustawy.

FOR RUSSIA EMPLOYEES ONLY

None of the information contained in the documents referred to in paragraph 7 of this Signature Card or in this Signature Card constitutes an advertisement of the Award(s) in Russia and must not be passed on to third parties or otherwise be made publicly available in Russia. The Award(s) have not been and will not be registered in Russia and are not intended for "placement" or "public circulation" in Russia.

FOR SAUDI ARABIA EMPLOYEES ONLY

The Award(s) are offered to you on behalf of Goldman Sachs Saudi Arabia, Commercial Registration Number 1010256672, 25th Floor, Kingdom Tower, Post Office Box 52969, Riyadh 11573, Saudi Arabia. The SIP documents may not be distributed in the Kingdom except to such persons as are permitted under the Offers of Securities Regulations issued by the Capital Market Authority. The Capital Market Authority does not make any representation as to the accuracy or completeness of the SIP documents, and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of the SIP documents. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of the SIP documents you should consult an authorized financial adviser.

FOR SINGAPORE EMPLOYEES ONLY

The Shares or the Award(s) may not be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than pursuant to, and in accordance with the conditions of, an exemption under any provision of Subdivision (4) of Division 1 of Part XIII of the Securities and Futures Act, Chapter 289 of Singapore.

The Award(s) are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

FOR SPAIN EMPLOYEES ONLY

Please note that the offer of an Award under the SIP does not constitute a public offer in Spain, and therefore it is not subject to registration with the Spanish authorities. The Award(s) are offered to you by GS Inc. in accordance with the terms and conditions set forth in the SIP and the Award Agreement(s). The grantees may be subject to certain reporting obligations for the acquisition or disposal of Shares under the SIP, the opening of cash or brokerage bank accounts abroad and the transfer or receipt of funds. Please consult your own advisors regarding these and other legal or tax obligations that may be applicable.

FOR TURKEY EMPLOYEES ONLY

This offer is not a public offering in terms of the Turkish Capital Markets legislation and the information provided herein cannot be construed as a public offering. The grant of the Award(s) should not be construed as a public offering or a private placement and is made to you as an employee of the Firm. You are not obligated to accept your Award(s). Your decision to accept or reject the Award(s) is entirely up to you and will have no impact on your employment or your career, either positive or negative. The grant of your Award(s) does not change or supplement the terms of your employment in any way. The plan documents do not constitute an employee handbook or an employment contract between you and the Firm.

The information set forth in the plan documents is solely for informative reasons and the Firm is not hereby giving you nor purports to be giving you investment or other financial advice. The Firm reserves the right to suspend, change, amend or supplement the terms of the plan documents, in whole or in part, for any reason at any time. If you are in doubt about the merits of the plan documents, you should contact your financial advisor.

Signature: _____

Print Name: _____

FOR UK EMPLOYEES ONLY

This document does not have regard to the specific investment objectives, financial situation and particular needs of any specific person who may receive it. Recipients should seek their own financial advice.
The Award(s) are subject to the terms and conditions set forth in the SIP and the Award Agreement(s). The price of shares and the income from such shares (if any) can fluctuate and may be affected by changes in the exchange rate for U.S. Dollars. Past performance will not necessarily be repeated. Levels and bases of taxation may change from time to time. Investors should consult their own tax advisors in order to understand tax consequences. GS Inc. has (and its associates may have) a material interest in the shares and the investments that are the subject of this document.

Date: _____

Employee ID #: _____

EXHIBIT 21.1

Significant Subsidiaries of the Registrant

The following are significant subsidiaries of The Goldman Sachs Group, Inc. as of December 31, 2018 and the states or jurisdictions in which they are organized. Each subsidiary is indented beneath its principal parent. The Goldman Sachs Group, Inc. owns, directly or indirectly, at least 99% of the voting securities of substantially all of the subsidiaries included below. The names of particular subsidiaries have been omitted because, considered in the aggregate as a single subsidiary, they would not constitute, as of the end of the year covered by this report, a "significant subsidiary" as that term is defined in Rule 1-02(w) of Regulation S-X under the Securities Exchange Act of 1934.

Name	State or Jurisdiction of Organization of Entity
The Goldman Sachs Group, Inc.	Delaware
Goldman Sachs & Co. LLC	New York
Goldman Sachs Paris Inc. et Cie	France
Goldman Sachs Funding LLC	Delaware
GS European Funding S.a r.l.	Luxembourg
Goldman, Sachs & Co. Wertpapier GMBH	Germany
Goldman Sachs (UK) L.L.C.	Delaware
Goldman Sachs Group UK Limited	United Kingdom
Goldman Sachs International Bank	United Kingdom
Goldman Sachs International	United Kingdom
Goldman Sachs Asset Management International	United Kingdom
Goldman Sachs Group Holdings (U.K.) Limited	United Kingdom
ELQ Investors VIII Ltd	United Kingdom
Titanium UK Holdco 1 Limited	United Kingdom
Titanium Luxco 2 S.A R.L.	Luxembourg
J. Aron & Company LLC	New York
Horizon Fundo De Investimento Multimercado Credito Privado — Investimento No Exterior	Brazil
Horizon Fund	Cayman Islands
GSAM Holdings LLC	Delaware
Goldman Sachs Asset Management, L.P.	Delaware
Goldman Sachs Asset Management International Holdings L.L.C.	Delaware
Goldman Sachs Asset Management Co., Ltd.	Japan
GSAM Holdings II LLC	Delaware
Goldman Sachs Private Equity Group Master Fund VI, LLC	Delaware
Goldman Sachs (Asia) Corporate Holdings L.L.C.	Delaware
Goldman Sachs Holdings (Asia Pacific) Limited	Hong Kong
Goldman Sachs (Japan) Ltd.	British Virgin Islands
Goldman Sachs Japan Co., Ltd.	Japan
Goldman Sachs Holdings (Hong Kong) Limited	Hong Kong
Goldman Sachs (Asia) Finance	Mauritius
Goldman Sachs Holdings (Singapore) PTE. Ltd.	Singapore
International Equity Investments (Singapore) PTE. Ltd.	Singapore
Goldman Sachs Holdings ANZ Pty Limited	Australia
Goldman Sachs Financial Markets Pty Ltd	Australia
Goldman Sachs Australia Group Holdings Pty Ltd	Australia
Goldman Sachs Australia Capital Markets Limited	Australia
Goldman Sachs Australia Pty Ltd	Australia
GS Lending Partners Holdings LLC	Delaware
Goldman Sachs Lending Partners LLC	Delaware
Goldman Sachs Bank USA	New York
Goldman Sachs Mortgage Company	New York
GS Financial Services II, LLC	Delaware
GS Funding Europe III Ltd.	United Kingdom
GS Funding Europe VI Ltd	United Kingdom
GS Funding Europe	United Kingdom
GS Funding Europe I Ltd.	Cayman Islands
GS Funding Europe II Ltd.	Cayman Islands
GS Funding Europe V Limited	United Kingdom

Name	State or Jurisdiction of Organization of Entity
GSSG Holdings LLC	Delaware
Goldman Sachs Specialty Lending Holdings, Inc.	Delaware
Special Situations Investing Group II, LLC	Delaware
Special Situations Investing Group III, Inc.	Delaware
GS Asian Venture (Delaware) L.L.C.	Delaware
Asia Investing Holdings Pte. Ltd.	Singapore
Mercer Investments (Singapore) PTE. Ltd.	Singapore
Austreo Commercial Ventures PTY Ltd.	Australia
GSFS Investments I Corp.	Delaware
ELQ Holdings (Del) LLC	Delaware
ELQ Holdings (UK) Ltd	United Kingdom
ELQ Investors VI Ltd	United Kingdom
ELQ Investors IX Ltd	United Kingdom
ELQ Investors II Ltd	United Kingdom
Hummingbird B.V.	Netherlands
Special Situations Investing Group, Inc.	Delaware
GS Diversified Funding LLC	Delaware
Hull Trading Asia Limited	Hong Kong
Goldman Sachs LLC	Mauritius
MTGLQ Investors, L.P.	Delaware
Broad Street Principal Investments Superholdco LLC	Delaware
Broad Street Principal Investments, L.L.C.	Delaware
BSPI Holdings, L.L.C.	Delaware
Broad Street Investments Holding (Singapore) PTE. Ltd	Singapore
Broad Street Principal Investments Holdings, L.P.	Delaware
Broad Street Credit Holdings LLC	Delaware
GS Fund Holdings, L.L.C.	Delaware
Murray Street Corporation	Delaware
Sphere Fundo De Investimento Multimercado — Investimento No Exterior Credito Privado	Brazil
Goldman Sachs PSI Global Holdings, LLC	Delaware

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (File No. 333-219206) and on Form S-8 (File Nos. 333-80839, 333-42068, 333-106430 and 333-120802) of The Goldman Sachs Group, Inc. of our report dated February 25, 2019 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K. We also consent to the incorporation by reference in such Registration Statements of our report dated February 25, 2019 relating to Supplemental Financial Information — Selected Financial Data, which appears in Exhibit 99.1 of this Form 10-K.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 25, 2019

EXHIBIT 31.1

CERTIFICATIONS

I, David M. Solomon, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2018 of The Goldman Sachs Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2019

/s/ David M. Solomon

Name: David M. Solomon
Title: Chief Executive Officer

CERTIFICATIONS

I, Stephen M. Scherr, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2018 of The Goldman Sachs Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2019

/s/ Stephen M. Scherr

Name: Stephen M. Scherr
Title: Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION

Pursuant to 18 U.S.C. § 1350, the undersigned officer of The Goldman Sachs Group, Inc. (the "Company") hereby certifies that the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 25, 2019

/s/ David M. Solomon

Name: David M. Solomon
Title: Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

CERTIFICATION

Pursuant to 18 U.S.C. § 1350, the undersigned officer of The Goldman Sachs Group, Inc. (the "Company") hereby certifies that the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 25, 2019

/s/ Stephen M. Scherr

Name: Stephen M. Scherr
Title: Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

EXHIBIT 99.1

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON SELECTED FINANCIAL DATA

To the Board of Directors and the Shareholders of
The Goldman Sachs Group, Inc.:

We have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated statements of financial condition of The Goldman Sachs Group, Inc. and its subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of earnings, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the effectiveness of the Company's internal control over financial reporting as of December 31, 2018, and in our report dated February 25, 2019, we expressed an unqualified opinion thereon. We have also previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated statements of financial condition of the Company as of December 31, 2016, 2015 and 2014, and the related consolidated statements of earnings, comprehensive income, changes in shareholders' equity and cash flows for the years ended December 31, 2015 and 2014 (none of which are presented herein), and we expressed unqualified opinions on those consolidated financial statements. In our opinion, the information set forth in the (i) income statement data, (ii) balance sheet data and (iii) common share data of the Supplemental Financial Information — Selected Financial Data of The Goldman Sachs Group, Inc. and its subsidiaries for each of the five years in the period ended December 31, 2018, appearing on page 191 in Part II, Item 8 of this Form 10-K, is fairly stated, in all material respects, in relation to the consolidated financial statements from which it has been derived.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 25, 2019

Exhibit 99.2

Debt and Trust Preferred Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
5.793% Fixed-to-Floating Rate Normal Automatic Preferred Enhanced Capital Securities of Goldman Sachs Capital II (and Registrant's guarantee with respect thereto)	New York Stock Exchange
Floating Rate Normal Automatic Preferred Enhanced Capital Securities of Goldman Sachs Capital III (and Registrant's guarantee with respect thereto)	New York Stock Exchange
Medium-Term Notes, Series A, Index-Linked Notes due 2037 of GS Finance Corp. (and Registrant's guarantee with respect thereto)	NYSE Arca
Medium-Term Notes, Series B, Index-Linked Notes due 2037	NYSE Arca
Medium-Term Notes, Series E, Index-Linked Notes due 2028 of GS Finance Corp. (and Registrant's guarantee with respect thereto)	NYSE Arca

Goldman Sachs 150 YEARS

The Goldman Sachs Group, Inc.

Annual Meeting of Shareholders Proxy Statement

2019

The Goldman Sachs Group, Inc.

Notice of 2019 Annual Meeting of Shareholders

ITEMS OF BUSINESS

- **Item 1**. Election to our Board of Directors of the 11 director nominees named in the attached Proxy Statement for a one-year term
- **Item 2**. An advisory vote to approve executive compensation (Say on Pay)
- **Item 3**. Ratification of the appointment of PwC as our independent registered public accounting firm for 2019
- **Item 4**. Consideration of a shareholder proposal, if properly presented by the relevant shareholder proponent
- Transaction of such other business as may properly come before our 2019 Annual Meeting of Shareholders

TIME	8:30 a.m., local time
DATE	Thursday, May 2, 2019
PLACE	Goldman Sachs offices located at: 30 Hudson Street, Jersey City New Jersey 07302

RECORD DATE	March 4, 2019

The close of business on the record date is when it is determined which of our shareholders are entitled to vote at our 2019 Annual Meeting of Shareholders, or any adjournments or postponements thereof

Your vote is important to us. Please exercise your shareholder right to vote.

By Order of the Board of Directors,

Beverly L. O'Toole

Beverly L. O'Toole
Assistant Secretary
March 22, 2019

Important Notice Regarding the Availability of Proxy Materials for our Annual Meeting to be held on May 2, 2019. Our Proxy Statement, 2018 Annual Report to Shareholders and other materials are available on our website at www.gs.com/proxymaterials. By March 22, 2019, we will have sent to certain of our shareholders a Notice of Internet Availability of Proxy Materials (Notice). The Notice includes instructions on how to access our Proxy Statement and 2018 Annual Report to Shareholders and vote online. Shareholders who do not receive the Notice will continue to receive either a paper or an electronic copy of our proxy materials, which will be sent on or about March 26, 2019. For more information, see *Frequently Asked Questions*.

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Directions to our 2019 Annual Meeting of Shareholders C-1

This Proxy Statement includes forward-looking statements. These statements are not historical facts, but instead represent only the firm's beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside of the firm's control. Forward-looking statements include statements about potential revenue and growth opportunities. It is possible that the firm's actual results, including the incremental revenues, if any, from such opportunities, and financial condition may differ, possibly materially, from the anticipated results, financial condition and incremental revenues indicated in these forward-looking statements. For a discussion of some of the risks and important factors that could affect the firm's future results and financial condition, see "Risk Factors" in Goldman Sachs' Annual Report on Form 10-K for the year ended December 31, 2018. Statements about Goldman Sachs' revenue and growth opportunities are subject to the risk that the firm's businesses may be unable to generate additional incremental revenues or take advantage of growth opportunities.

Letter from our Chairman and CEO

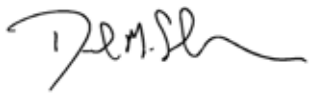
March 22, 2019

Fellow Shareholders:

I am pleased to invite you to attend the 2019 Annual Meeting of Shareholders of The Goldman Sachs Group, Inc. We will hold the meeting on Thursday, May 2, 2019 at 8:30 a.m., local time, at our offices in Jersey City, New Jersey. Enclosed you will find a notice setting forth the items we expect to address during the meeting, a letter from our Lead Director, our Proxy Statement, a form of proxy and a copy of our 2018 Annual Report to Shareholders.

In our 2018 letter to shareholders, which is included in the Annual Report, we continue our dialogue regarding our strategic priorities for the firm. In developing our forward strategy, our guiding principles include client centricity and the creation of long-term shareholder value. We believe that driving sustainable, long-term results will require innovation, scale, diversity and efficient capital and expense management, all of which must be supported by sound risk management. We hope you will find the letter to be informative.

I would like to personally thank you for your continued support of Goldman Sachs as we invest together in the future of this firm. We look forward to welcoming many of you to our Annual Meeting. Your vote is important to us: even if you do not plan to attend the meeting in person, we hope your votes will be represented.



David M. Solomon

Chairman and Chief Executive Officer

Letter from our Lead Director

March 22, 2019

To my fellow shareholders,

2018 was an active year for the firm and for our Board, during which we added two independent directors and completed one of a Board's most fundamental roles — the appointment of, and transition to, a new CEO.

For several years I have written to you about the importance of executive succession planning, discussing our commitment to developing leaders in every area of the firm's businesses and the close work of our independent directors and Lloyd Blankfein, our former Chairman and CEO, on the firm's long-term and emergency succession plans. This past year was certainly no exception to our focus on this critical responsibility, as the final steps of our multi-year executive succession planning effort materialized with the July 2018 announcement that David Solomon would assume the CEO role in October 2018 and the Chairman role in January 2019.

During 2018 we transitioned the firm's leadership from Lloyd to David, and oversaw the appointment of John Waldron to the role of President and Chief Operating Officer and of Stephen Scherr to the role of Chief Financial Officer. David, John and Stephen are dedicated and talented individuals who have distinguished themselves throughout their careers at the firm and are representative of the best of the firm's culture. These transitions are emblematic of the strength and quality of the firm's leadership bench, and as a Board we continue to be confident in the ongoing breadth, depth and commitment of our management team.

On behalf of the entire Board I also want to express our deep gratitude to Lloyd. As Chairman and CEO, Lloyd led the firm through some of its best, but also some of its most challenging, times. Through it all, Lloyd's dedication to the firm, its people and its shareholders was self-evident, and time and time again, Lloyd proved to be a prudent risk manager and an insightful colleague and leader over his 36 year career at Goldman Sachs.

As you will read about further in this Proxy Statement, in conjunction with our CEO succession planning, we actively considered our Board leadership structure, and determined that our Board and our firm would remain best served by having David serve in a combined Chairman and CEO role. However, as our shareholders know, our Board is committed to maintaining strong independent leadership, which we have established through a robust, independent Lead Director role that is ably supported by the independence and diversity of our Board as a whole. We will continue to re-evaluate our leadership structure at least annually to ensure that it continues to serve us well.

As a Board, overseeing the firm's creation and delivery of long-term shareholder value is paramount to our duties. Our Board engages regularly with senior management on its development and execution of firmwide, regional and divisional strategies. We have seen firsthand David's and the new management team's unwavering commitment to find new ways to more effectively deliver *One Goldman Sachs* to the firm's clients by means of a strategy focused on innovation and growth and supported by sound risk management. As a Board we will hold senior management responsible for driving and sustaining long-term growth for our firm. Many of the firm's initiatives have already begun bearing fruit, and it is clear that management is committed to enhancing transparency and accountability to shareholders. We continue to advise management as they further develop their strategic plans and establish related targets and metrics that we as a Board, and you as shareholders, can use to hold them to account.

To most effectively carry out our duties as a Board, our composition must reflect an appropriate diversity — broadly defined — of demographics, viewpoints, experiences and expertise. We have enhanced our Proxy Statement disclosure this year to more specifically highlight for shareholders the diversity of our directors. Furthermore, I am pleased to note that during 2018 we added two esteemed women to our Board — Dr. Drew Faust and Vice Admiral Jan Tighe (Retired, U.S. Navy).

Both Drew and Jan bring a wealth of experience, knowledge and new and unique perspectives to our Board. As the former President of Harvard University, Drew led Harvard through a decade of growth and transformation, and is well positioned to provide insights on the firm's strategies relating to diversity, recruiting and retention as well as reputational risk. Jan has over 20 years of senior executive experience in cybersecurity and information technology, including through her service as the former Deputy Chief of Naval Operations for Information Warfare and Director of Naval Intelligence.

As you will see in our Proxy Statement, two of my fellow directors — Bill George and Jim Johnson — will be retiring from our Board in advance of the Annual Meeting in accordance with the retirement age policy set forth in our Corporate Governance Guidelines. On behalf of you, the firm and our Board, I would also like to thank Bill and Jim for their outstanding commitment to our Board and our firm. Bill was integrally involved in the firm's Business Standards Committee review, and served as the founding chair of our Public Responsibilities Committee. As our former Compensation Committee Chair, Jim helped to evolve the firm's compensation structure and program. Both of their contributions to our Board and our firm have been immeasurable over their tenure, during which time they provided us with valuable insight, judgment and institutional knowledge across a wide range of topics.

In connection with Bill's retirement, we are pleased that Ellen Kullman has agreed to join and chair our Public Responsibilities Committee. In this new role Ellen will draw upon her broad range of public company and other experiences, including her focus on sustainability efforts as the former Chair and CEO of DuPont and her commitment to diversity as a co-chair of Paradigm for Parity. During her tenure on our Board Ellen has displayed unwavering commitment to the oversight of reputational risk, and we look forward to her continued contributions in this new role.

We regularly review our Board composition, and as we continue our active search for new directors, our focus is and will remain on ensuring that our Board has an appropriate mix and balance of skills and experiences to carry out its duties.

In closing, I know many of you may have questions or concerns relating to 1Malaysia Development Berhad (1MDB) matters. As Lead Director, I want to assure you that the Board has been, and will continue to be, focused on these matters. We take seriously our oversight of the firm's business standards and reputation, and believe that it is critical that the firm and its people continue to hold themselves to the highest standards of integrity.

As our 2019 Annual Meeting approaches, on behalf of our Board, I want to thank you for your ongoing support of both our Board and the firm. As your Lead Director I had another active year of engagement. In addition to our regular Board and committee meetings, in 2018 I had over 70 meetings, calls and engagements with the firm and its people, our shareholders, regulators and other constituents, including meetings with shareholders representing approximately 30% of our shareholder base. This engagement is invaluable to me and informs the work of our entire Board. I look forward to continuing our dialogue in the year to come.

Adebayo O. Ogunlesi

Lead Director

Executive Summary

This summary highlights certain information from our Proxy Statement for the 2019 Annual Meeting. You should read the entire Proxy Statement carefully before voting. Please refer to our glossary in *Frequently Asked Questions* on page 90 for definitions of certain capitalized terms.

2019 Annual Meeting Information

DATE AND TIME	PLACE	RECORD DATE	ADMISSION
8:30 a.m., local time Thursday, May 2, 2019	Goldman Sachs offices located at: 30 Hudson Street, Jersey City, New Jersey	March 4, 2019	Photo identification and proof of ownership as of the record date are required to attend the Annual Meeting

For additional information about our Annual Meeting, including how to access the audio webcast, see *Frequently Asked Questions*.

Matters to be Voted on at our 2019 Annual Meeting

	BOARD RECOMMENDATION	PAGE
Item 1. Election of Directors	FOR each director	12
Other Management Proposals		
Item 2. An Advisory Vote to Approve Executive Compensation (Say on Pay)	FOR	69
Item 3. Ratification of PwC as our Independent Registered Public Accounting Firm for 2019	FOR	75
Shareholder Proposal		
Item 4. Shareholder Proposal Regarding Right to Act by Written Consent Requests that the Board undertake steps to permit shareholder action without a meeting by written consent	AGAINST	78

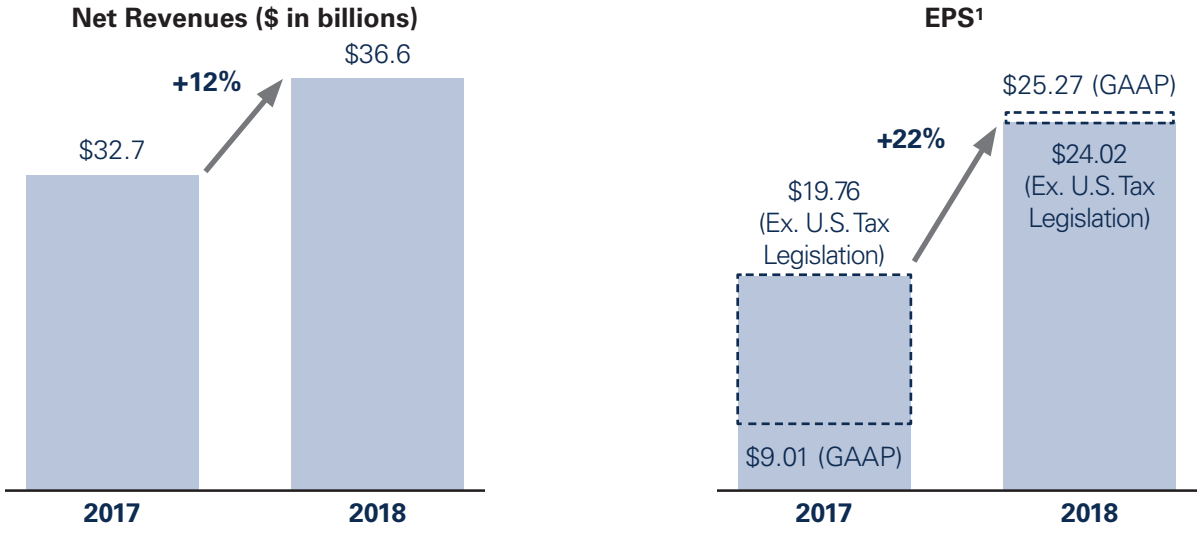
Performance Highlights and Key Developments

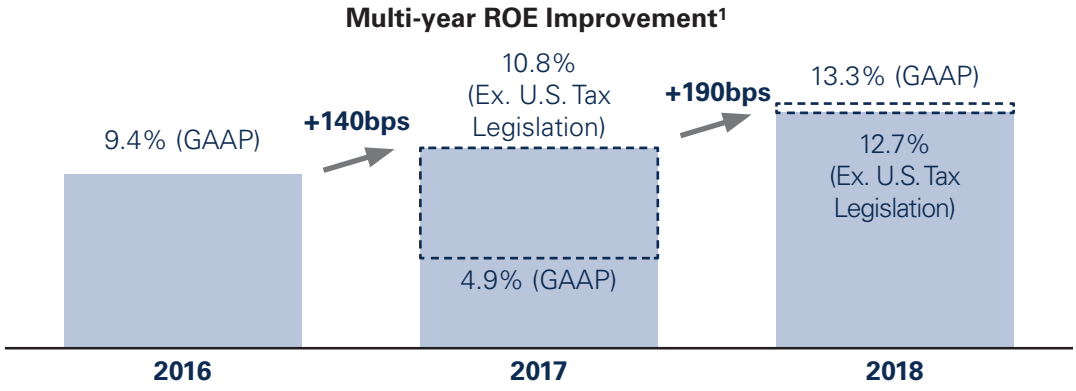
We encourage you to read the following Performance Highlights and Key Developments as background to this Proxy Statement.

2018 PERFORMANCE HIGHLIGHTS

Business Performance Highlights

- Net revenues in 2018 were up 12% year-over-year to $36.6 billion, contributing to year-over-year EPS growth of 22% (Ex. U.S. Tax Legislation).[1]
  - » Our net revenues were the highest since 2010, with each of our four business segments posting higher net revenues year-over-year.
- We maintained expense discipline while investing for future growth, as operating expenses rose in line with revenues despite substantial investments in new business initiatives and innovative technology.
  - » Pre-tax earnings grew 12% year-over-year to $12.5 billion, the highest since 2010.
- Our 2018 ROE (Ex. U.S. Tax Legislation) of 12.7% improved 190 basis points year-over-year,[1] and reflects 330 basis points of total improvement as compared to 2016.
- We grew BVPS by 15% during 2018.



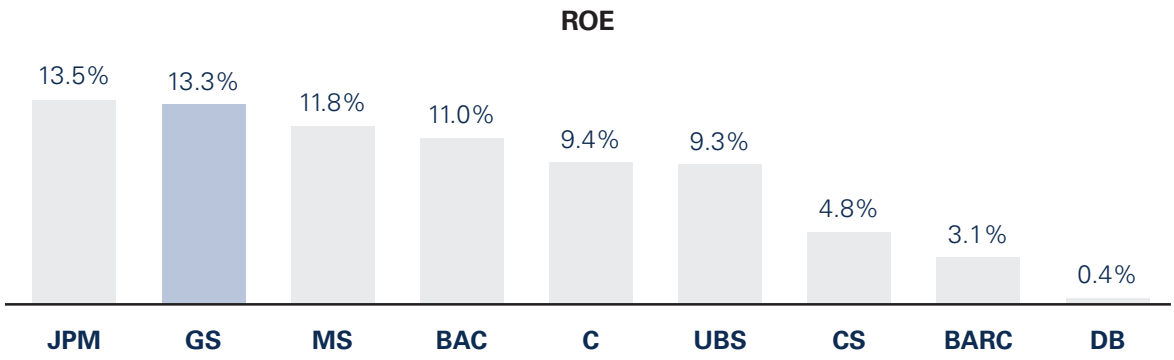


[1] To improve comparability across periods, both 2017 and 2018 ROE and EPS are shown here excluding one-time impacts of the Tax Cuts and Jobs Act (U.S. Tax Legislation). During 2017 the firm recorded a $4.4 billion one-time income tax expense, based on our best estimate of the expected size of a one-time deemed repatriation tax on foreign earnings and re-measurement of our deferred tax assets. This charge reduced 2017 ROE by 590 basis points and 2017 EPS by $10.75. During 2018, the firm finalized this estimate using updated information, including subsequent guidance issued by the U.S. Internal Revenue Service, resulting in a $487 million income tax benefit, which increased 2018 ROE by 60 basis points and 2018 EPS by $1.25. For a reconciliation of these non-GAAP measures with the corresponding GAAP measures, please see *Annex A*.

Outperformance vs. Global Peers

The firm continued to post strong relative performance against its global peer group.

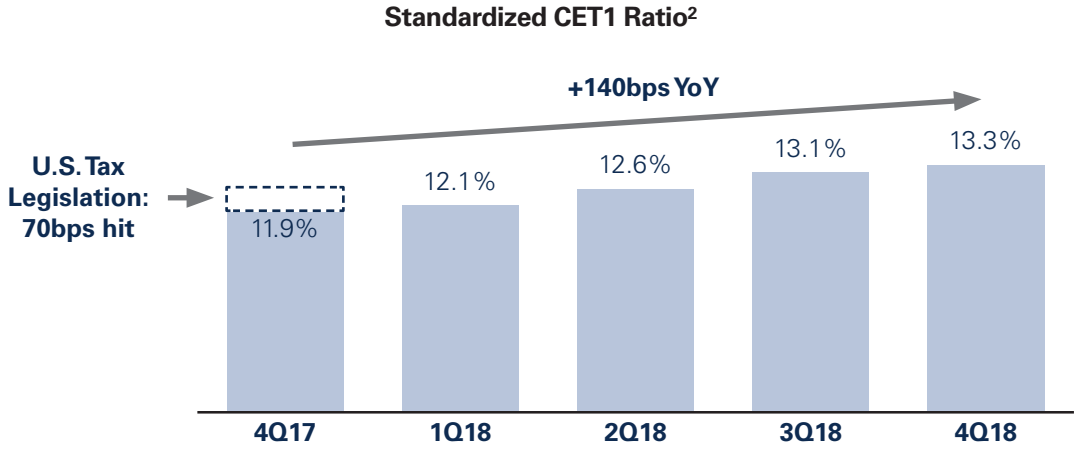
- Our 2018 ROE of 13.3% was approximately 190 basis points higher than the U.S. Peer average and approximately 890 basis points higher than the European Peer average.[1]



Strong Capital Position

Throughout 2018, management demonstrated a commitment to ensuring a strong capital position for the firm, rebuilding book value and capital ratios following a $4.4 billion one-time charge for U.S. Tax Legislation at the end of 2017, which reduced our 2017 BVPS by $11.31 and our Standardized Common Equity Tier 1 (CET1) ratio by 70 basis points.[2]

- Our Standardized CET1 ratio increased by 140 basis points during 2018, while we grew BVPS by 15%.



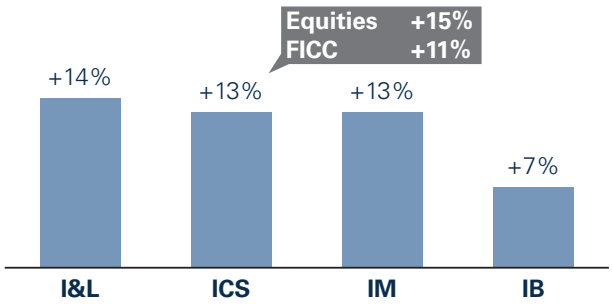
[1] U.S. Peers refers to Bank of America Corp., Citigroup Inc., JPMorgan Chase & Co. and Morgan Stanley. European Peers refers to Barclays, Credit Suisse, Deutsche Bank and UBS.

[2] For consistency, the 4Q17 standardized ratio has been presented on a fully-phased basis, a non-GAAP measure.

Leading and Diversified Client Franchise

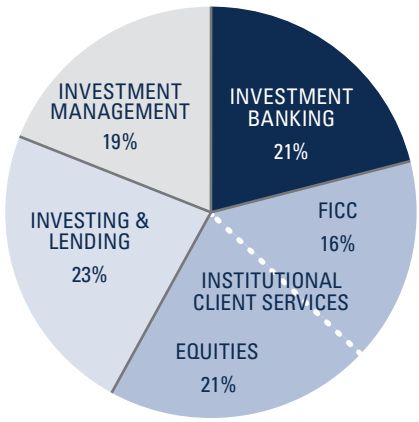
Throughout 2018, we maintained strong franchise positions across our businesses, invested in opportunities for growth and maintained a diversified mix of net revenues.

Year-over-Year Net Revenue Change



FY18 Net Revenues ($ in billions)	I&L	ICS	IM	IB
	$8.3	$13.5	$7.0	$7.9

Contribution to Full Year 2018 Net Revenues by Segment



Key Business Highlights

INVESTMENT BANKING

- #1 in worldwide announced and completed M&A; #1 in worldwide equity and equity-related offerings and common stock offerings; #2 in high yield and #4 in investment grade debt offerings (U.S. dollar and euro)
- Near-record net revenues, including the highest net revenues in Financial Advisory since 2007 and strong performance in Underwriting

INVESTING & LENDING

- Continued support for our clients through lending and capital commitment
- Record net interest income in Debt Securities and Loans of approximately $2.7 billion
- Continued to invest in a broad-based consumer banking platform, reflected in approximately $36 billion in deposits

INSTITUTIONAL CLIENT SERVICES

- Strong wallet share, ranking #2 with institutional clients; since 2016, increased our FICC and Equities institutional wallet share by 65 basis points and 110 basis points, respectively[1]
- Year-over-year revenue growth driven by healthier volumes, better wallet share[1] and improved execution in certain of our businesses

INVESTMENT MANAGEMENT

- Record annual net revenues, including record management and other fees
- Assets under supervision increased 3% year-over-year to $1.54 trillion
- Long-term fee-based net inflows of $37 billion

[1] Wallet share and ranking through first nine months of 2018 as full-year data not yet available. Source: Coalition.

KEY DEVELOPMENTS – EXECUTIVE SUCCESSION & STRATEGY

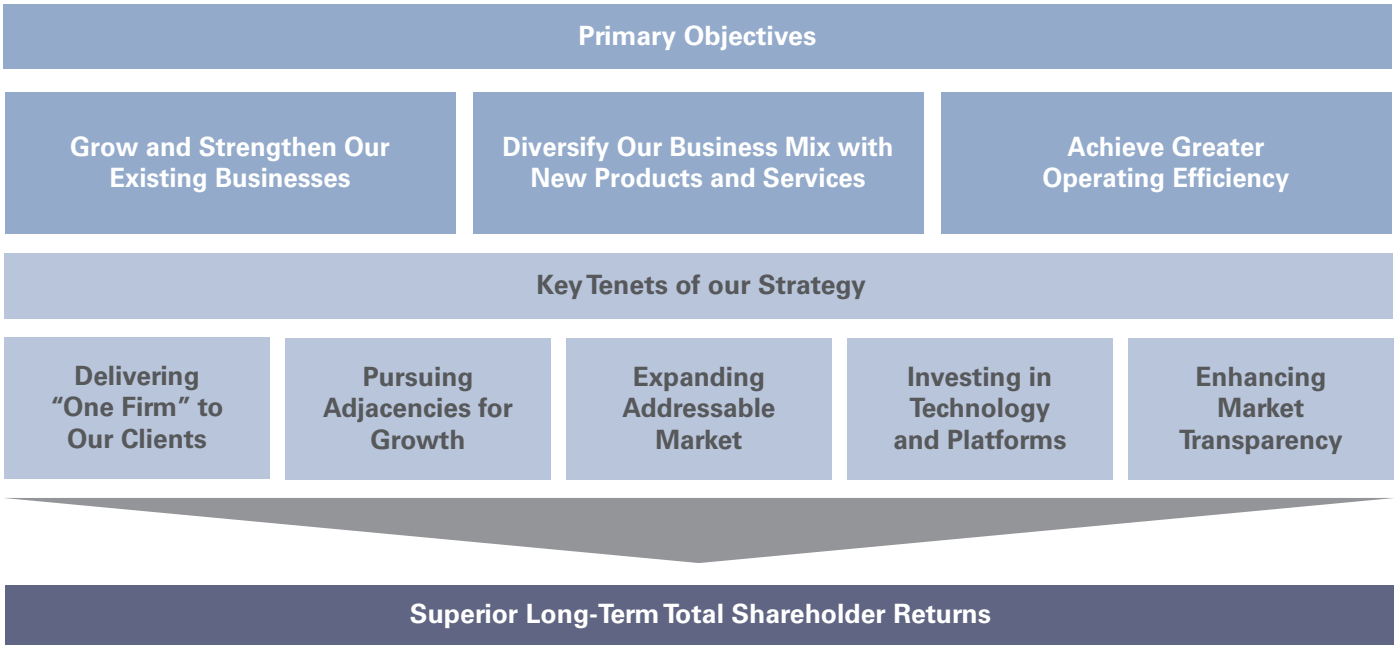
Executive Succession

During 2018, as a result of the continuous succession planning efforts of our independent directors, our then-Chairman and CEO Lloyd Blankfein and our current Chairman and CEO David Solomon, we successfully executed a transition of our Executive Leadership Team:

- On October 1, 2018, Mr. Solomon succeeded Mr. Blankfein as our CEO, and became Chairman of our Board on January 1, 2019.
- On October 1, 2018, John Waldron, who previously served as a Co-Head of the Investment Banking Division, succeeded Mr. Solomon as our President and COO.
- On November 5, 2018, Stephen Scherr, who previously served as the CEO of Goldman Sachs Bank USA and head of the Consumer & Commercial Banking Division, succeeded R. Martin Chavez as our CFO.

Demonstrated Strategic Vision

One of the key priorities of our new Executive Leadership Team has been to develop and articulate their client-centric strategy for the firm's future growth and to continue to increase our transparency and accountability to shareholders.



Compensation Highlights *(see Compensation Matters, beginning on page 36)*

We provide highlights of our compensation program below. It is important that you review our CD&A and compensation-related tables in this Proxy Statement for a complete understanding of our compensation program.

2018 COMPENSATION DETERMINATIONS

The following table summarizes our Compensation Committee's 2018 annual compensation decisions for our Executive Leadership Team, as well as for Mr. Blankfein, our retired CEO.

	2018 TOTAL COMPENSATION ($ IN MILLIONS)	PORTION GRANTED AS EQUITY-BASED AWARD ($ IN MILLIONS)
EXECUTIVE LEADERSHIP TEAM		
David M. Solomon, Chairman and CEO	$23.00	$15.41 (100% PSUs)
John E. Waldron, President and COO	$20.00	$11.60 (100% PSUs)
Stephen M. Scherr, Executive Vice President and CFO	$18.00	$10.36 (100% PSUs)
RETIRED CEO		
Lloyd C. Blankfein	$20.50	$14.25 (100% RSUs)

See following page regarding increases in PSU thresholds

For additional information regarding compensation decisions for these individuals as well as our other NEOs (R. Martin Chavez, Richard Gnodde and Timothy O'Neill), please see our CD&A beginning on page 36.

Executive Leadership Team and Mr. Blankfein – 2018 Compensation Rationale

- Our Compensation Committee believed it was appropriate to reward our Executive Leadership Team for the firm's strong improvement in operating performance in 2018 and other key factors described below. Given the leadership transitions that occurred in 2018, the Committee also considered each individual's responsibilities and length of service in his prior and current roles. Thus, the Committee believed it was appropriate to set Executive Leadership Team compensation below the 2017 levels awarded to the individuals who had previously served in those roles, mainly because the Executive Leadership Team did not serve in their new roles for the entire year.
- For Mr. Blankfein, our Compensation Committee took into account firmwide and individual performance considerations, as well as his retirement as CEO effective September 30, 2018 and as Chairman effective December 31, 2018.
- In determining 2018 compensation for our Executive Leadership Team and Mr. Blankfein, our Compensation Committee considered the following key factors:
  - The firm's **strong operating performance**, including:
    - The firm's returns, which were the highest in nearly a decade and outperformed the average for our U.S. and European Peers;
    - A 22% increase in EPS (excluding the impact of the charge related to U.S. Tax Legislation in 2017 and the related benefit in 2018), the firm's highest net revenues since 2010 and a 12% increase in pre-tax earnings; and
    - Management's **continued focus on expense discipline while investing for future growth**, with operating expenses rising in line with revenues despite substantial investments in new business initiatives and innovative technology;
  - The strength of our client franchise, including:
    - The firm's **sustained strength in Investment Banking**, including our continued #1 position in announced and completed M&A, #1 ranking in equity and equity-related offerings, and strong positioning in debt underwriting (including #2 in high yield);
    - Success in our Investment Management business, including **record 2018 net revenues**; and
    - **Strong wallet share with institutional clients in our market-making businesses**, ranking #2 across our Institutional Client Services franchise[1]; and
  - The **individual performance** of our Executive Leadership Team and Mr. Blankfein, including:
    - Embracing the responsibilities of their firmwide leadership roles, including by emphasizing the ongoing importance of firm culture, diversity and appropriate consideration of reputational and conduct issues; and
    - Our Executive Leadership Team's focus on developing their client-centric strategy for the firm's future growth, including driving front-to-back reviews of the firm's existing businesses and demonstrating accountability for the growth initiatives we publicly announced in September 2017.

[1] Wallet share and ranking through first nine months of 2018 as full-year data not yet available. Source: Coalition.

SAY ON PAY & SHAREHOLDER ENGAGEMENT

- **2018 Say on Pay Results.** Our 2018 Say on Pay vote received the support of **approximately 88%** of our shareholders, which the Compensation Committee viewed positively.
- **Extensive Shareholder Engagement.** In light of our Board's desire to continue to prioritize shareholder engagement, we (including, in certain cases, our Lead Director and the Chair of our Compensation Committee) **met with shareholders representing more than 40% of Common Stock outstanding** to discuss compensation-related matters and other areas of focus.
- **Board Responsiveness.** The feedback we received in these discussions informed our Board and our Compensation Committee's actions for 2018:

STAKEHOLDER FEEDBACK	COMPENSATION COMMITTEE ACTION
Support for use of PSUs for current Executive Leadership Team	**Equity-based annual compensation for our Executive Leadership Team continues to be paid entirely in PSUs**
Support for high proportion of CEO annual variable compensation tied to ongoing performance metrics	**73% of CEO's 2018 annual variable compensation tied to ongoing performance metrics (compared to U.S. Peer average of approximately 55%)**
Focus on aspirational PSU goals	**PSU thresholds increased:** ■ **Absolute ROE threshold for maximum payout increased from 14% to 16%** ■ **Target for 100% payout under relative ROE goals now requires above median performance (increased from 50th percentile to 60th percentile)** ■ **Minimum absolute ROE threshold for any payout increased from 4% to 5%** ***(For additional key facts about our PSUs, see page 39)***
Support for proactive engagement	■ **Continued emphasis on shareholder engagement** ■ **Commitment to engagement by Lead Director and Compensation Committee Chair**

ADDITIONAL COMPENSATION DETERMINATIONS RELATING TO 1MDB

- As more fully described in our Form 10-K filed February 26, 2019, the firm is cooperating with the United States Department of Justice (DOJ) and with other governmental and regulatory investigations relating to certain bond transactions the firm arranged for 1Malaysia Development Berhad (1MDB) in 2012 and 2013. The DOJ has made public documents that allege, among other things, that certain individuals, including two former non-executive employees and an unnamed non-executive employee co-conspirator who has been put on administrative leave, participated in a conspiracy to misappropriate proceeds of the 1MDB offerings for themselves and others and to pay bribes to various government officials to obtain and retain 1MDB business for the firm. The firm has also been named in certain related civil proceedings, including a shareholder derivative suit filed in February 2019 against the individuals who were members of our Board as of 2018 year-end alleging, among other things, breaches of fiduciary duties, including in connection with alleged insider trading, and violations of securities laws, including relating to the firm's stock repurchases and solicitation of proxies. In March 2019, the firm also received a demand from an alleged shareholder to investigate and bring claims against the current members of our Board, several current executive officers and a former executive officer and director based on their oversight and public disclosures regarding 1MDB and related internal controls. In addition, on December 17, 2018, the Attorney General of Malaysia issued a press statement that criminal charges in Malaysia had been filed against certain of the firm's non-U.S. subsidiaries (as well as certain individuals, including a former non-executive employee of the firm).
- Our Board and our Compensation Committee have been and continue to be focused on the ongoing governmental, regulatory and civil proceedings relating to 1MDB and take these matters very seriously.
- In light of the ongoing 1MDB investigation, our Board and Compensation Committee made two important compensation-related decisions in January 2019:
  - First, they approved a new forfeiture provision in the 2018 year-end equity-based awards granted to our NEOs that provides our Board with the flexibility to reduce the size of the award granted to any NEO prior to payment and/or forfeit the underlying delivered Shares at Risk if it is later determined that the results of the 1MDB investigation would have impacted 2018 year-end compensation decisions for any such NEO; and
  - Second, they deferred their decision under the LTIP awards originally granted in 2011 to Mr. Blankfein and two other retired executives who hold such awards until more information is available, given that the 1MDB investigation relates to events that occurred during the performance period of these awards. As a result, no amounts under these LTIP awards have yet been determined or paid. The Board will publicly disclose when a final determination is made.

Corporate Governance Highlights *(see Corporate Governance, beginning on page 12)*

KEY FACTS ABOUT OUR BOARD

We strive to maintain a well-rounded and diverse Board that balances financial industry expertise with independence, and the institutional knowledge of longer-tenured directors with the fresh perspectives brought by newer directors. As summarized below, our directors bring to our Board a variety of skills and experiences developed across a broad range of industries, both in established and growth markets, and in each of the public, private and not-for-profit sectors.

NOMINEE SKILLS & EXPERIENCES

5	5	11	6	5	8	3	10
FINANCIAL SERVICES INDUSTRY	OTHER COMPLEX/ REGULATED INDUSTRIES	RISK MANAGEMENT	TALENT DEVELOPMENT	TECHNOLOGY	PUBLIC COMPANY GOVERNANCE	AUDIT/TAX/ ACCOUNTING	GLOBAL

KEY BOARD STATISTICS

	DIRECTOR NOMINEES	INDEPENDENCE OF NOMINEES
Board	11	9 of 11
Audit	4	All
Compensation	3	All
Governance	9	All
Public Responsibilities	3	All
Risk	7	6 of 7

13	50	22	> 180
BOARD MEETINGS IN 2018	STANDING COMMITTEE MEETINGS IN 2018	DIRECTOR SESSIONS IN 2018 WITHOUT MANAGEMENT PRESENT	MEETINGS OF LEAD DIRECTOR / CHAIRS OUTSIDE OF BOARD MEETINGS

DIVERSITY OF NOMINEES ENHANCES BOARD PERFORMANCE

64%	4.3 YEARS	63	54%	27%
JOINED IN THE LAST 5 YEARS	MEDIAN TENURE	MEDIAN AGE	NOMINEES DIVERSE BY RACE, GENDER OR SEXUAL ORIENTATION	NOMINEES WHO ARE NON-U.S. OR DUAL CITIZENS

DIRECTOR NOMINEES

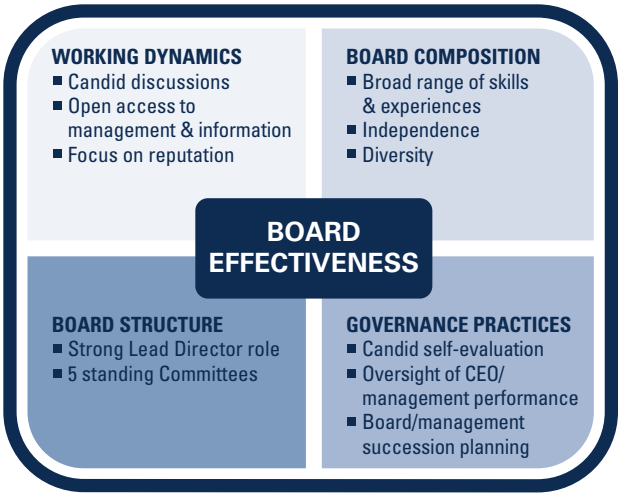
NAME/AGE/INDEPENDENCE	DIRECTOR SINCE	OCCUPATION/CAREER HIGHLIGHTS	COMMITTEE MEMBERSHIP					OTHER CURRENT U.S.-LISTED PUBLIC BOARDS*
			GOV	COMP	AUD	PRC	RISK	
David Solomon, 57 Chairman and CEO	October 2018	Chairman & CEO, The Goldman Sachs Group, Inc.						0
Adebayo Ogunlesi, 65 Independent Lead Director	October 2012	Chairman & Managing Partner, Global Infrastructure Partners	C	Ex-Officio				2
Michele Burns, 61 Independent	October 2011	Retired (Chairman & CEO, Mercer LLC; CFO of each of: Marsh & McLennan Companies, Inc., Mirant Corp. and Delta Air Lines, Inc.)	■	C			■	3
Drew Faust, 71 Independent	July 2018	Professor, Harvard University (Retired, President, Harvard University)	■			■	■	0
Mark Flaherty, 59 Independent	December 2014	Retired (Vice Chairman, Wellington Management Company)	■		■		■	0
Ellen Kullman, 63 Independent	December 2016	Retired (Chairman & CEO, E.I. du Pont de Nemours and Company)	■	■		C		3
Lakshmi Mittal, 68 Independent	June 2008	Chairman & CEO, ArcelorMittal S.A.	■	■		■		1
Peter Oppenheimer, 56 Independent	March 2014	Retired (Senior Vice President and CFO, Apple, Inc.)	■		C		■	0
Jan Tighe, 56 Independent	December 2018	Retired (Vice Admiral, United States Navy)	■		■		■	1
David Viniar, 63 Non-Employee	January 2013	Retired (CFO, The Goldman Sachs Group, Inc.)					■	1
Mark Winkelman, 72 Independent	December 2014	Private investor	■		■		C	0

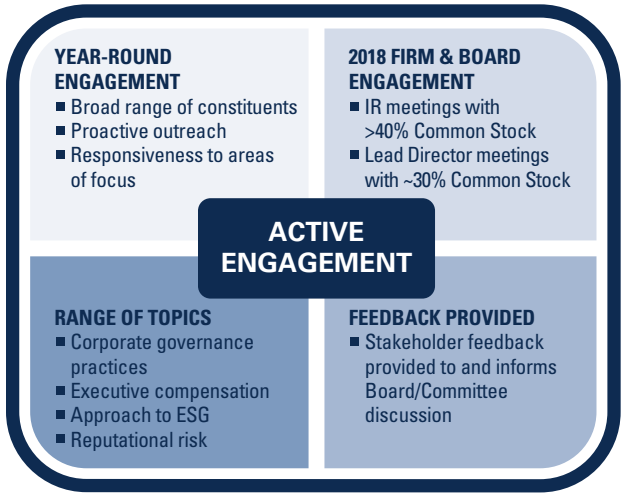
* As per SEC rules.

C Designates Committee Chairs. Effective May 2, 2019, Ellen Kullman will become a member and the Chair of our Public Responsibilities Committee, at which time she will no longer be a member of our Risk Committee.

FOUNDATION IN SOUND GOVERNANCE PRACTICES AND ENGAGEMENT

- **Independent Lead Director** with expansive duties (enhanced in 2019)
- Regular **executive sessions** of independent and non-employee directors
- Focus of our independent directors on **executive succession planning**
- **CEO evaluation process** conducted by our Lead Director with our Governance Committee
- Comprehensive process for **Board refreshment**, including a focus on diversity and on succession for Board leadership positions
- **Annual Board and Committee evaluations**, which incorporate feedback on **individual director performance**
- Candid, **one-on-one discussions** between our Lead Director and each non-employee director supplementing formal evaluations
- **Active, year-round shareholder engagement process**, whereby we, including our Lead Director, meet and speak with our shareholders and other key constituents
- Board and Committee oversight of **environmental, social and governance (ESG) matters**
- Directors may **contact any employee** of our firm directly, and our Board and its Committees may **engage independent advisors** at their sole discretion
- **Annual elections** of directors (i.e., no staggered board)
- **Proxy access right** for shareholders, which right was adopted pro-actively after engagement with shareholders. In addition, shareholders are welcome to continue to **recommend director candidates** for consideration by our Governance Committee
- **Majority voting with resignation policy** for directors in uncontested elections
- Shareholders holding at least 25% of our outstanding shares of Common Stock can **call a special meeting** of shareholders
- **No supermajority vote requirements** in our charter or By-laws
- **Executive retention and share ownership requirements** require significant long-term share holdings by our NEOs
- **Director share ownership requirement** of 5,000 shares or RSUs, with a transition period for new directors
  - » All RSUs granted as director compensation must be held until the year after a director retires from our Board. Directors are not permitted to hedge or pledge these RSUs





Corporate Governance

Item 1. Election of Directors

Proposal Snapshot — Item 1. Election of Directors

What is being voted on: Election to our Board of 11 director nominees.

Board recommendation: After a review of the individual qualifications and experience of each of our director nominees and his or her contributions to our Board, our Board determined unanimously to recommend that shareholders vote FOR all of our director nominees.

OUR DIRECTORS

Recent Changes to our Board

We were pleased to welcome two new independent directors to our Board in 2018: Drew Faust in July 2018 and Jan Tighe in December 2018. Each of Dr. Faust and Vice Admiral Tighe was recommended to our Lead Director and to our Governance Committee by our independent director search firm. Both Dr. Faust and Vice Admiral Tighe bring to the Board and its Committees significant experience as described in their respective biographies below, and we look forward to their continued contributions.

Our Corporate Governance Guidelines provide that a director will typically retire at the annual meeting following his or her 75th birthday. In accordance with this policy, William George and James Johnson will not be standing for re-election and will be retiring from our Board on the eve of our 2019 Annual Meeting. We are grateful to Mr. George and Mr. Johnson for providing our Board with their informed counsel and judgment for many years. Effective May 2, 2019, Ellen Kullman will succeed Mr. George as the Chair of our Public Responsibilities Committee, drawing upon her background as the former CEO of DuPont, her public company board service and her other professional experience as described in her biography below.

In connection with the firm's recent executive leadership transition, Mr. Solomon joined our Board on October 1, 2018 and became Chairman of the Board on January 1, 2019. Mr. Blankfein retired from our Board on December 31, 2018.

For more information on our process for Board refreshment, see—*Structure of our Board and Governance Practices—Year-Round Review of Board Composition*.

Board of Directors' Qualifications and Experience

Our director nominees have a great diversity of experience and bring to our Board a wide variety of skills, qualifications and viewpoints that strengthen their ability to carry out their oversight role on behalf of shareholders.

DIVERSITY OF SKILLS AND EXPERIENCES			
Financial services industry	Complex / Regulated industries	Global experience / Established & growth markets	Human Capital Management / Talent development
Academia	Technology / Cybersecurity	Audit, tax, accounting & preparation of financial statements	Compliance
Operations	Government / Military / Public policy & regulatory affairs	Risk & financial products / Credit evaluation	ESG
Risk management		Public company / Corporate governance	

CORE QUALIFICATIONS AND EXPERIENCES	
Financial literacy	Demonstrated management/leadership ability
Strategic thinking	Leadership & expertise in their respective fields
Involvement in educational, charitable & community organizations	Extensive experience across public, private or not-for-profit sectors
Integrity & business judgment	Reputational focus

Given the nature of our business, our Governance Committee continues to believe that directors with current and prior financial industry experience, among other skills, are critical to our Board's effectiveness. We take very seriously, however, any actual or perceived conflicts of interest that may arise, and have taken various steps to address this.

For example, in addition to our policies on director independence and related person transactions, we maintain a policy with respect to outside director involvement with financial firms, such as private equity firms or hedge funds. Under this policy, in determining whether to approve any current or proposed affiliation of a non-employee director with a financial firm, our Board will consider, among other things, the legal, reputational, operational and business issues presented, and the nature, feasibility and scope of any restrictions, procedures or other steps that would be necessary or appropriate to ameliorate any perceived or potential future conflicts or other issues.

Diversity is an important factor in our consideration of potential and incumbent directors

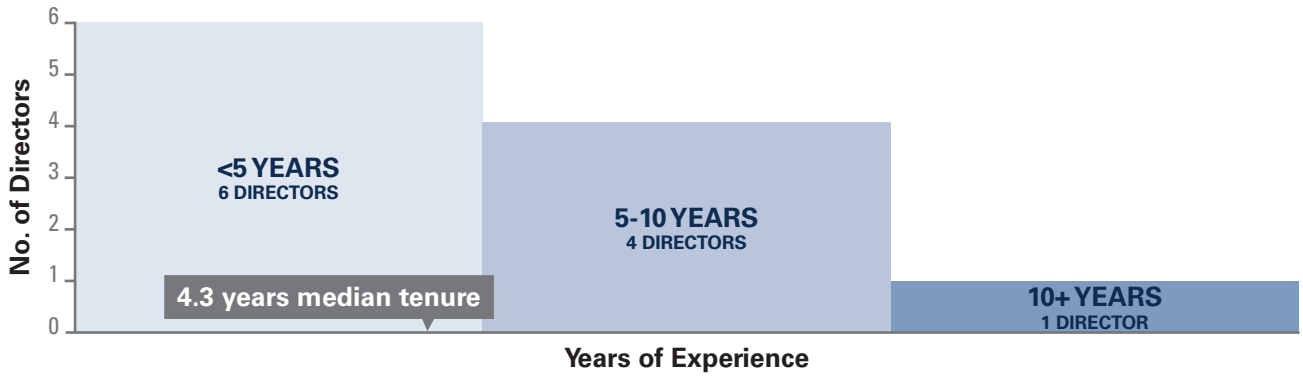
Our Governance Committee considers a number of demographics and other factors, including race, gender, ethnicity, sexual orientation, culture, nationality and work experiences (including military service), seeking to develop a board that, as a whole, reflects diverse viewpoints, backgrounds, skills, experiences and expertise.

Among the factors our Governance Committee considers in identifying and evaluating a potential director candidate is the extent to which the candidate would add to the diversity of our Board. The Committee considers the same factors in determining whether to re-nominate an incumbent director. In that connection, and using the self-identified characteristics of our directors, our nominees include four directors who are women, one director who is Black, one director who is of Indian descent, one director with career service in the military and three directors who are non-U.S. or dual citizens.

Diversity is also considered as part of the annual Board evaluation.

Director Tenure: A Balance of Experiences

Our nominees have an average and median tenure of approximately 4 years. This experience balances the institutional knowledge of our longer-tenured directors with the fresh perspectives brought by our newer directors.



Comprehensive Re-Nomination Process

Our Governance Committee appreciates the importance of critically evaluating individual directors and their contributions to our Board in connection with re-nomination decisions.

In considering whether to recommend re-nomination of a director for election at our Annual Meeting, our Governance Committee conducts a detailed review, considering factors such as:

- The extent to which the director's **judgment, skills, qualifications and experience** (including that gained due to tenure on our Board) continue to contribute to the success of our Board;
- **Feedback from the annual Board evaluation and individual discussions** between each non-employee director and our Lead Director;
- **Attendance** and **participation** at, and **preparation** for, Board and Committee meetings;
- **Independence**;
- **Shareholder feedback**, including the support received by those director nominees elected at our 2018 Annual Meeting of Shareholders;
- **Outside board and other affiliations,** including any actual or perceived conflicts of interest; and
- The extent to which the director continues to contribute to the **diversity** of our Board.

Each of our director nominees has been recommended for election by our Governance Committee and approved and re-nominated for election by our Board.

If elected by our shareholders, our director nominees, all of whom are currently members of our Board, will serve for a one-year term expiring at our 2020 Annual Meeting of Shareholders. Each director will hold office until his or her successor has been elected and qualified or until the director's earlier resignation or removal.

All of our directors must be elected by majority vote of our shareholders.

- A director who fails to receive a majority of FOR votes will be required to tender his or her resignation to our Board.
- Our Governance Committee will then assess whether there is a significant reason for the director to remain on our Board, and will make a recommendation to our Board regarding the resignation.

For detailed information on the vote required for the election of directors and the choices available for casting your vote, please see *Frequently Asked Questions*.

Biographical information about our director nominees follows. This information is current as of March 1, 2019 and has been confirmed by each of our director nominees for inclusion in our Proxy Statement. There are no family relationships among any of our directors and executive officers.

David M. Solomon, 57

Chairman and CEO

Director Since: October 2018

Other U.S.-Listed Company Directorships

- Current: None
- Former (Past 5 Years): None

KEY EXPERIENCE AND QUALIFICATIONS

- **Engaged and motivating leader who embodies our firm's culture**: With nearly 20 years of leadership roles at our firm, leverages firm-specific and industry knowledge to lead the firm and its people, develop the firm's strategy, embody the "tone at the top" and help protect and enhance our firm's culture, including through his commitment to talent development and diversity of our workforce, in each case providing his insights to our Board and keeping directors apprised of significant developments in our business and industry
- **Strategic thinker with deep business and industry expertise**: Utilizes deep familiarity with all aspects of the firm's businesses, including from his experience as President and Chief Operating Officer, to develop and articulate the firm's strategic vision, assess attendant risks and guide the firm's growth
- **Actively engaged with constituents as the face of our firm**: Committed to engaging with our external stakeholders, draws upon his extensive interaction with our clients, investors and other constituents to communicate feedback and offer insight and perspective to our Board

CAREER HIGHLIGHTS

- Goldman Sachs
  - Chairman (January 2019 – Present) and Chief Executive Officer (October 2018 – Present)
  - President and Chief or Co-Chief Operating Officer (January 2017 – September 2018)
  - Co-Head of the Investment Banking Division (July 2006 – December 2016)
  - Co-Head of High Yield & Leveraged Loan Business and then Global Head of the Financing Group (variously, September 1999 – July 2006)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Trustee, Hamilton College
- Member, Board of Directors, Robin Hood Foundation

EDUCATION

- Graduate of Hamilton College

Adebayo O. Ogunlesi, 65

Independent Lead Director

Director Since: October 2012

GS Committees

- Governance (Chair)
- Ex-officio member:
  - Audit
  - Compensation
  - Public Responsibilities
  - Risk

Other U.S.-Listed Company Directorships

- Current: Callaway Golf Company; Kosmos Energy Ltd.
- Former (Past 5 Years): None

KEY EXPERIENCE AND QUALIFICATIONS

- **Strong leader, including leadership experience in the financial services industry**: Founder, Chairman and Managing Partner of Global Infrastructure Partners and a former executive of Credit Suisse with over 20 years of leadership experience in the financial services industry, including investment banking and private equity
- **International business and global capital markets experience, including emerging markets**: Advised and executed transactions and provided capital markets strategy advice globally
- **Expertise regarding governance and compensation**: Service on the boards of directors and board committees of other public companies and not-for-profit entities, and, in particular, as chair or former chair of the nominating and corporate governance committees at each of Callaway Golf and Kosmos Energy, provides additional governance perspective

CAREER HIGHLIGHTS

- Chairman and Managing Partner, Global Infrastructure Partners, a private equity firm that invests worldwide in infrastructure assets in the energy, transport, water and waste industry sectors (July 2006 – Present)
- Credit Suisse, a financial services company
  - Executive Vice Chairman and Chief Client Officer (2004 – 2006)
  - Member of Executive Board and Management Committee (2002 – 2006)
  - Head of Global Investment Banking Department (2002 – 2004)
- Law Clerk to the Honorable Thurgood Marshall, Associate Justice of the U.S. Supreme Court (1980-1981)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Member, National Board of Directors, The NAACP Legal Defense and Educational Fund, Inc.
- Member, Board of Directors, Partnership for New York City Fund
- Member, Harvard University Global Advisory Council and Harvard Law School Leadership Council of New York
- Member, Board of Dean's Advisors, Harvard Business School

EDUCATION

- Graduate of Oxford University, Harvard Business School and Harvard Law School

M. Michele Burns, 61

Independent

Director Since: October 2011

GS Committees

- Compensation (Chair)
- Governance
- Risk

Other U.S.-Listed Company Directorships

- Current: Anheuser-Busch InBev; Cisco Systems, Inc.; Etsy, Inc.
- Former (Past 5 Years): Alexion Pharmaceuticals, Inc.

KEY EXPERIENCE AND QUALIFICATIONS

- **Leadership, compensation, governance and risk expertise**: Leverages current and former service on the boards of directors and board committees of other public companies and not-for-profit entities
- **Human capital management and strategic consulting**: Background gained as former CEO of Mercer LLC
- **Accounting and the review and preparation of financial statements**: Garnered expertise as former CFO of several global public companies

CAREER HIGHLIGHTS

- Chief Executive Officer, Retirement Policy Center, sponsored by Marsh & McLennan Companies, Inc. (MMC); Center focuses on retirement public policy issues (October 2011 – February 2014)
- Chairman and Chief Executive Officer, Mercer LLC, a subsidiary of MMC and a global leader in human resource consulting, outsourcing and investment services (September 2006 – early October 2011)
- Chief Financial Officer, MMC, a global professional services and consulting firm (March 2006 – September 2006)
- Chief Financial Officer, Chief Restructuring Officer and Executive Vice President, Mirant Corporation, an energy company (May 2004 – January 2006)
- Executive Vice President and Chief Financial Officer, Delta Air Lines, Inc., an air carrier (including various other positions, 1999 – April 2004)
- Senior Partner and Leader, Southern Regional Federal Tax Practice, Arthur Andersen LLP, an accounting firm (including various other positions, 1981 – 1999)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Center Fellow and Strategic Advisor, Stanford University Center on Longevity
- Former Board Member and Treasurer, Elton John AIDS Foundation

EDUCATION

- Graduate of University of Georgia (including for Masters)

Drew G. Faust, 71

Independent

Director Since: July 2018

GS Committees

- Governance
- Public Responsibilities
- Risk

Other U.S.-Listed Company Directorships

- Current: None
- Former (Past 5 Years): Staples, Inc.

KEY EXPERIENCE AND QUALIFICATIONS

- **Human capital and diversity**: As Former President of Harvard University, well-positioned to provide insight on the firm's strategies relating to diversity, recruiting and retention
- **Leadership and governance**: Current and prior service on the boards of directors of public and/or not-for-profit entities provides additional perspective on governance
- **Operations and risk management**: During her tenure at Harvard University she, among other things, broadened the university's international reach, promoted collaboration across disciplines and administrative units and helped to oversee the operational and other risks related to the university as well as the management of its endowment

CAREER HIGHLIGHTS

- Harvard University
  - President Emeritus and Arthur Kingsley Porter University President (January 2019 – Present)
  - President (July 2007 – June 2018)
  - Lincoln Professor of History (January 2001 – December 2018)
  - Founding Dean, Radcliffe Institute for Advanced Study (January 2001 – July 2007)
- University of Pennsylvania (1975 – 2000); various faculty positions including as the Annenberg Professor of History and the Director of the Women's Studies Program

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Member, Educational Advisory Board, John Simon Guggenheim Memorial Foundation
- Member, American Academy of Arts & Sciences
- Former Member, Board of Directors, The Broad Institute Inc.
- Former Member, Board of Directors, Harvard Management Company Inc.

EDUCATION

- Graduate of Bryn Mawr College and the University of Pennsylvania (Masters and Ph.D.)

Mark A. Flaherty, 59

Independent

Director Since: December 2014

GS Committees

- Audit
- Governance
- Risk

Other U.S.-Listed Company Directorships

- Current: None
- Former (Past 5 Years): None

KEY EXPERIENCE AND QUALIFICATIONS

- **Investment management**: Leverages over 20 years of experience in the investment management industry, including at Wellington Management Company
- **Perspective on institutional investors' approach to company performance and corporate governance**: Experience developed through his tenure at Wellington and Standish, Ayer and Wood
- **Risk expertise**: Draws upon years of experience in the financial industry

CAREER HIGHLIGHTS

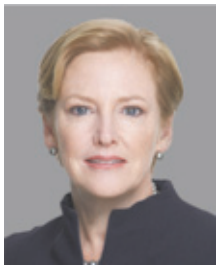
- Wellington Management Company, an investment management company
  - » Vice Chairman (2011 – 2012)
  - » Director of Global Investment Services (2002 – 2012)
  - » Partner, Senior Vice President (2001 – 2012)
- Standish, Ayer and Wood, an investment management company
  - » Executive Committee Member (1997 – 1999)
  - » Partner (1994 – 1999)
  - » Director, Global Equity Trading (1991 – 1999)
- Director, Global Equity Trading, Aetna, a diversified healthcare benefit company (1987 – 1991)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Member, Board of Trustees, The Newman School
- Member, Board of Directors, Boston Scholar Athletes
- Former Member, Board of Trustees, Providence College

EDUCATION

- Graduate of Providence College



Ellen J. Kullman, 63

Independent

Director Since: December 2016

GS Committees

- Public Responsibilities (Chair)*
- Compensation
- Governance
- Risk*

Other U.S.-Listed Company Directorships

- Current: Amgen Inc.; Dell Technologies Inc.; United Technologies Corporation
- Former (Past 5 Years): E.I. du Pont de Nemours and Company

KEY EXPERIENCE AND QUALIFICATIONS

- **Leadership and strategy**: During her tenure as Chair and CEO of DuPont, a highly-regulated science and technology-based company with global operations, led the company through a period of strategic transformation and growth
- **Corporate governance and compensation**: Leverages service on the boards of directors and board committees (including in leadership roles) of other public companies and not-for-profit entities
- **Focus on reputational, risk and ESG matters**: Draws upon experiences gained from DuPont and other board roles, including in connection with her new role as Chair of our Public Responsibilities Committee

CAREER HIGHLIGHTS

- E.I. du Pont de Nemours and Company, a provider of basic materials and innovative products and services for diverse industries
  - » Chairman and Chief Executive Officer (2009 – 2015)
  - » President (October 2008 – December 2008)
  - » Executive Vice President, DuPont Coatings and Color Technologies, DuPont Electronic and Communication Technologies; DuPont Performance Materials, DuPont Safety and Protection, Marketing and Sales, Pharmaceuticals, Risk Management and Safety and Sustainability (2006 – 2008)
  - » Various positions, including Group Vice President, DuPont Safety and Protection (1988 – 2006)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Member, Board of Overseers, Tufts University School of Engineering
- Trustee, Northwestern University
- Member, National Academy of Engineering
- Member, The Business Council
- Co-Chair, Paradigm for Parity

EDUCATION

- Graduate of Tufts University and Kellogg School of Management, Northwestern University

* Effective May 2, 2019, Ms. Kullman will become a member and the Chair of our Public Responsibilities Committee, at which time she will no longer be a member of our Risk Committee.

Lakshmi N. Mittal, 68

Independent

Director Since: June 2008

GS Committees

- Compensation
- Governance
- Public Responsibilities

Other U.S.-Listed Company Directorships

- Current: ArcelorMittal S.A.
- Former (Past 5 Years): None

KEY EXPERIENCE AND QUALIFICATIONS

- **Leadership, business development and operations**: Founder of Mittal Steel Company and Chairman and Chief Executive Officer of ArcelorMittal, the world's leading integrated steel and mining company
- **International business and growth markets**: Leading company with operations in over 18 countries on four continents provides global business expertise and perspective on public responsibilities
- **Corporate governance and international governance**: Current and prior service on the boards of directors of other international public companies and not-for-profit entities assists with committee responsibilities

CAREER HIGHLIGHTS

- ArcelorMittal S.A., a steel and mining company
  - » Chairman and Chief Executive Officer (May 2008 – Present)
  - » President and Chief Executive Officer (November 2006 – May 2008)
- Chief Executive Officer, Mittal Steel Company N.V. (1976 – November 2006)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Member, International Business Council of the World Economic Forum
- Trustee, Cleveland Clinic
- Member, Governing Board, Indian School of Business
- Member, European Round Table of Industrialists
- Chairman, Governing Council, LNM Institute of Information Technology
- Member, Harvard University Global Advisory Council

EDUCATION

- Graduate of St. Xavier's College in India

Peter Oppenheimer, 56

Independent

Director Since: March 2014

GS Committees

- Audit (Chair)
- Governance
- Risk

Other U.S.-Listed Company Directorships

- Current: None
- Former (Past 5 Years): None

KEY EXPERIENCE AND QUALIFICATIONS

- **Capital and risk management**: Garnered experience as CFO and Controller at Apple and Divisional CFO at ADP
- **Review and preparation of financial statements**: Over 20 years as a CFO or controller provides valuable experience and perspective as Audit Committee Chair
- **Oversight of technology and technology risks**: Leverages prior experience in overseeing information systems at Apple

CAREER HIGHLIGHTS

- Apple, Inc., a designer and manufacturer of electronic devices and related software and services
  - » Senior Vice President (retired September 2014)
  - » Senior Vice President and Chief Financial Officer (2004 – June 2014)
  - » Senior Vice President and Corporate Controller (2002 – 2004)
  - » Vice President and Corporate Controller (1998 – 2002)
  - » Vice President and Controller, Worldwide Sales (1997 – 1998)
  - » Senior Director, Finance and Controller, Americas (1996 – 1997)
- Divisional Chief Financial Officer, Finance, MIS, Administration and Equipment Leasing Portfolio at Automatic Data Processing, Inc. (ADP), a leading provider of human capital management and integrated computing solutions (1992 – 1996)
- Consultant, Information Technology Practice at Coopers & Lybrand, LLP (1988 – 1992)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Secretary, Community Board, French Hospital Medical Center
- Board Member, Pacific Coast Health Center

EDUCATION

- Graduate of California Polytechnic State University and the Leavey School of Business, University of Santa Clara

Jan E. Tighe, 56

Independent

Director Since: December 2018

GS Committees

- Audit
- Governance
- Risk

Other U.S.-Listed Company Directorships

- Current: Huntsman Corporation
- Former (Past 5 Years): None

KEY EXPERIENCE AND QUALIFICATIONS

- **Technology and technology risk**: Over 20 years of senior executive experience in cybersecurity and information technology, including leading complex cyber and intelligence operations and creating a Navy digital transformation roadmap, which experiences provide perspective to aid in oversight of the firm's deployment of technology and the management of technology risk
- **Strategic planning and operations**: Experience in strategic planning, risk assessment and executing on naval strategies across a variety of positions, including as a Fleet Commander and as a university president
- **Leadership and governance**: Retired Vice Admiral who served in numerous leadership roles in the U.S. Navy and with the National Security Agency, culminating in service as a managing director on the U.S. Navy's Corporate Board

CAREER HIGHLIGHTS

- United States Navy, Vice Admiral and various positions of increasing authority and responsibility (1980 – 2018), including:
  - Deputy Chief of Naval Operations for Information Warfare and Director, Naval Intelligence (2016 – 2018)
  - Fleet Commander or Deputy Commander, U.S. Fleet Cyber Command/U.S. Tenth Fleet (2013 – 2016)
  - University President, Naval Postgraduate School (2012 – 2013)
  - Director, Decision Superiority Division of the Chief of Naval Operations' Staff (2011 – 2012)
  - Deputy Director of Operations, U.S. Cyber Command (2010 – 2011)
  - Executive Assistant to General Keith Alexander, U.S. Cyber Command and National Security Agency/Central Security Service (2009 – 2010)
  - Commander, National Security Agency/Central Security Service Hawaii (2006 – 2009)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Member and Global Security Expert, Strategic Advisory Group, Paladin Capital Group
- Member of the National Security Sector Advisory Committee, The MITRE Corporation
- Governance Fellow, National Association of Corporate Directors

EDUCATION

- Graduate of U.S. Naval Academy and Naval Postgraduate School (including for Ph.D.)

David A. Viniar, 63

Non-Employee

Director Since: January 2013

GS Committees

- Risk

Other U.S.-Listed Company Directorships

- Current: Square, Inc.
- Former (Past 5 Years): None

KEY EXPERIENCE AND QUALIFICATIONS

- **Financial industry, in particular risk management and regulatory affairs**: Over 30 years of experience in various roles at Goldman Sachs, as well as service as chair of the audit and risk committee of Square, Inc., provides valuable perspective to our Board
- **Unique insight into our firm's financial reporting, controls and risk management**: As our former CFO, able to provide unique insight about our risks to our Risk Committee
- **Capital management processes and assessments**: Experience gained through serving as Goldman Sachs' CFO for over 10 years

CAREER HIGHLIGHTS

- Goldman Sachs
  - Executive Vice President and Chief Financial Officer (May 1999 – January 2013)
  - Head of Operations, Technology, Finance and Services Division (December 2002 – January 2013)
  - Head of the Finance Division and Co-Head of Credit Risk Management and Advisory and Firmwide Risk (December 2001 – December 2002)
  - Co-Head of Operations, Finance and Resources (March 1999 – December 2001)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Trustee, Garden of Dreams Foundation
- Former Trustee, Union College

EDUCATION

- Graduate of Union College and Harvard Business School

Mark O. Winkelman, 72

Independent

Director Since: December 2014

GS Committees

- Risk (Chair)
- Audit
- Governance

Other U.S.-Listed Company Directorships

- Current: None
- Former (Past 5 Years): Anheuser-Busch InBev

KEY EXPERIENCE AND QUALIFICATIONS

- **Knowledge about our firm, including our fixed income business, and an understanding of the risks we face**: Utilizes his previous tenure at Goldman Sachs as well as his service on the board of our subsidiary, Goldman Sachs International
- **Audit and financial expertise, corporate governance and leadership**: Leverages prior service on the board of directors and the audit and finance committees of Anheuser-Busch InBev and service on the boards of directors and audit, finance and other committees of not-for-profit entities
- **Financial services industry**: Experience gained through his role as operating partner at J.C. Flowers and through other industry experience

CAREER HIGHLIGHTS

- Private investor (Present)
- Operating Partner, J.C. Flowers & Co., a private investment firm focusing on the financial services industry (2006 – 2008)
- Goldman Sachs
  - Retired Limited Partner (1994 – 1999)
  - Management Committee Member and Co-Head of Fixed Income Division (1987 – 1994)
  - Various positions at the firm, including Head of J. Aron Division (1978 – 1987)
- Senior Investment Officer, The World Bank (1974 – 1978)

OTHER PROFESSIONAL EXPERIENCE AND COMMUNITY INVOLVEMENT

- Director and Risk Committee Chair, Goldman Sachs International
- Trustee, Penn Medicine
- Trustee Emeritus, University of Pennsylvania

EDUCATION

- Graduate of Erasmus University in the Netherlands and The Wharton School, University of Pennsylvania

INDEPENDENCE OF DIRECTORS

9 of our 11 director nominees are independent

Our Board determined, upon the recommendation of our Governance Committee, that Ms. Burns, Dr. Faust, Mr. Flaherty, Ms. Kullman, Mr. Mittal, Mr. Ogunlesi, Mr. Oppenheimer, Vice Admiral Tighe and Mr. Winkelman are "independent" within the meaning of NYSE rules and our Director Independence Policy. Mr. George and Mr. Johnson, who are retiring from our Board on the eve of the 2019 Annual Meeting, were also determined to be independent. Furthermore, our Board has determined that all of our independent directors satisfy the heightened audit committee independence standards under SEC and NYSE rules, and that Compensation Committee members also satisfy the relevant heightened standards under NYSE rules.

Process for Independence Assessment

A director is considered independent under NYSE rules if our Board determines that the director does not have any direct or indirect material relationship with Goldman Sachs. Our Board has established a Policy Regarding Director Independence (Director Independence Policy) that provides standards to assist our Board in determining which relationships and transactions might constitute a material relationship that would cause a director not to be independent.

To assess independence, our Governance Committee and our Board review detailed information regarding our independent directors, including employment and public company and not-for-profit directorships, as well as information regarding immediate family members and affiliated entities.

Through the course of this review, our Governance Committee and our Board consider relationships between the independent directors (and their immediate family members and affiliated entities) on the one hand, and Goldman Sachs and its affiliates on the other, in accordance with our Director Independence Policy. This includes a review of revenues to the firm from, and payments or donations made by us to, relevant entities affiliated with our directors (or their immediate family members) as a result of ordinary course transactions or contributions to not-for-profit organizations.

For more information on the categories of transactions that our Governance Committee and our Board reviewed, considered and determined to be immaterial under our Director Independence Policy, see *Annex B—Additional Details on Director Independence.*

Structure of our Board and Governance Practices

BOARD OF DIRECTORS CHAIRMAN AND CEO: DAVID SOLOMON; LEAD DIRECTOR: ADEBAYO OGUNLESI				
AUDIT COMMITTEE	**COMPENSATION COMMITTEE**	**GOVERNANCE COMMITTEE**	**PUBLIC RESPONSIBILITIES COMMITTEE**	**RISK COMMITTEE**
4 Members: All Independent	**3 Members:** All Independent	**9 Members:** All Independent	**3 Members:** All Independent	**7 Members:** 6 Independent

OUR BOARD COMMITTEES

Our Board has five standing Committees: Audit, Compensation, Governance, Public Responsibilities and Risk. The specific membership of each Committee allows us to take advantage of our directors' diverse skill sets, which enables deep focus on Committee matters.

Each of our Committees:

- Operates pursuant to a written charter (available on our website at www.gs.com/charters)
- Evaluates its performance annually
- Reviews its charter annually

The firm's **reputation is of critical importance**. In fulfilling their duties and responsibilities, each of our standing Committees and our Board consider the potential effect of any matter on our reputation.

AUDIT

ALL INDEPENDENT	KEY SKILLS & EXPERIENCES REPRESENTED	KEY RESPONSIBILITIES
*Peter Oppenheimer** Mark Flaherty Jan Tighe Mark Winkelman Adebayo Ogunlesi (ex-officio)	■ Audit/Tax/Accounting ■ Preparation or oversight of financial statements ■ Compliance ■ Technology	■ Assist our Board in its oversight of our financial statements, legal and regulatory compliance, independent auditors' qualification, independence and performance, internal audit function performance and internal controls over financial reporting ■ Decide whether to appoint, retain or terminate our independent auditors ■ Pre-approve all audit, audit-related, tax and other services, if any, to be provided by the independent auditors ■ Appoint and oversee the work of our Director of Internal Audit and annually assess her performance ■ Prepare the Audit Committee Report

* Multiple members of our Audit Committee, including the Chair, have been determined to be "audit committee financial experts."

COMPENSATION

ALL INDEPENDENT	KEY SKILLS & EXPERIENCES REPRESENTED	KEY RESPONSIBILITIES
Michele Burns William George** James Johnson** Ellen Kullman Lakshmi Mittal Adebayo Ogunlesi (ex-officio)	■ Setting of executive compensation ■ Evaluation of executive and firmwide compensation programs ■ Human capital management, including diversity	■ Determine and approve the compensation of our CEO and other executive officers ■ Approve, or make recommendations to our Board for it to approve, our incentive, equity-based and other compensation plans ■ Assist our Board in its oversight of the development, implementation and effectiveness of our policies and strategies relating to our human capital management function, including: » recruiting; » retention; » career development and progression; » management succession (other than that within the purview of our Governance Committee); and » diversity and employment practices ■ Prepare the Compensation Committee Report

GOVERNANCE

ALL INDEPENDENT	KEY SKILLS & EXPERIENCES REPRESENTED	KEY RESPONSIBILITIES
Adebayo Ogunlesi Michele Burns Drew Faust Mark Flaherty William George** James Johnson** Ellen Kullman Lakshmi Mittal Peter Oppenheimer Jan Tighe Mark Winkelman	■ Corporate governance ■ Talent development and succession planning ■ Current and prior public company board service	■ Recommend individuals to our Board for nomination, election or appointment as members of our Board and its Committees ■ Oversee the evaluation of the performance of our Board and our CEO ■ Review and concur with the succession plans for our CEO and other members of senior management ■ Take a leadership role in shaping our corporate governance, including developing, recommending to our Board and reviewing on an ongoing basis the corporate governance principles and practices that apply to us ■ Review periodically the form and amount of non-employee director compensation and make recommendations to our Board with respect thereto

PUBLIC RESPONSIBILITIES

ALL INDEPENDENT	KEY SKILLS & EXPERIENCES REPRESENTED	KEY RESPONSIBILITIES
*William George*** *Ellen Kullman*** Drew Faust James Johnson** Lakshmi Mittal Adebayo Ogunlesi (ex-officio)	■ Reputational risk ■ ESG ■ Government and regulatory affairs ■ Philanthropy	■ Assist our Board in its oversight of our firm's relationships with major external constituencies and our reputation ■ Oversee the development, implementation and effectiveness of our policies and strategies relating to citizenship, corporate engagement and relevant significant public policy issues ■ Review ESG issues affecting our firm, including through the periodic review of the ESG report

RISK

MAJORITY INDEPENDENT	KEY SKILLS & EXPERIENCES REPRESENTED	KEY RESPONSIBILITIES
Mark Winkelman Michele Burns Drew Faust Mark Flaherty Ellen Kullman** Peter Oppenheimer Jan Tighe Adebayo Ogunlesi (ex-officio) **Non-independent** David Viniar	■ Understanding of how risk is undertaken, mitigated and controlled in complex industries ■ Technology and cybersecurity ■ Understanding of financial products ■ Expertise in capital adequacy and deployment	■ Assist our Board in its oversight of our firm's overall risk-taking tolerance and management of financial and operational risks, such as market, credit and liquidity risk, including reviewing and discussing with management: » our firm's capital plan, regulatory capital ratios, capital management policy and internal capital adequacy assessment process, and the effectiveness of our financial and operational risk management policies and controls; » our liquidity risk metrics, management, funding strategies and controls, and the contingency funding plan; and » our market, credit, operational and model risk management strategies, policies and controls

**William George and James Johnson will not be standing for re-election and will be retiring from our Board on the eve of the 2019 Annual Meeting. Effective May 2, 2019, Ellen Kullman will become a member and the Chair of our Public Responsibilities Committee, at which time she will no longer be a member of our Risk Committee.

BOARD AND COMMITTEE EVALUATIONS

Board and Committee evaluations play a critical role in ensuring the effective functioning of our Board. It is important to take stock of Board, Committee and director performance and to solicit and act upon feedback received from each member of our Board. To this end, under the leadership of our Lead Director, our Governance Committee is responsible for evaluating the performance of our Board annually, and each of our Board's Committees also annually conducts a self-evaluation.

2018 Evaluations: A Multi-Step Process

REVIEW OF EVALUATION PROCESS

Our Lead Director and Governance Committee periodically review the evaluation process to ensure that actionable feedback is solicited on the operation of our Board and its Committees, as well as on director performance

Over the last several years, we have refined the format of the questionnaire and added specific evaluations of the Lead Director, each Committee Chair and each individual director

ONGOING FEEDBACK

Directors provide ongoing, real-time feedback outside of the evaluation process

Lines of communication between our directors and management are always open

QUESTIONNAIRE

Provides director feedback on an unattributed basis

Feedback from questionnaire informs one-on-one and closed session discussions

FEEDBACK INCORPORATED

Policies and practices updated as appropriate as a result of the annual and ongoing feedback

Examples include changes to Committee structure, additional presentations on various topics, evolution of director skill sets and new directors added, refinements to meeting materials and presentation format and additional Audit and Risk Committee meetings

ONE-ON-ONE DISCUSSIONS

One-on-one discussions between our Lead Director and each non-employee director

Provides further opportunity for candid discussion to solicit additional feedback as well as to provide individual feedback. Feedback on Lead Director performance provided to him by the Secretary to our Board

EVALUATION SUMMARY

Summary of Board and Committee evaluations results provided to full Board

CLOSED SESSION

Closed session discussion of Board and Committee evaluations led by our Lead Director and independent Committee Chairs

Joint discussion across our Committees provides for a synergistic review of Board and Committee performance

TOPICS CONSIDERED DURING THE BOARD AND COMMITTEE EVALUATIONS INCLUDE:

DIRECTOR PERFORMANCE

- Individual director performance
- Lead Director (in that role)
- Each Committee Chair (in that role)

BOARD AND COMMITTEE OPERATIONS

- Board and Committee membership, including director skills, background, expertise and diversity
- Committee structure, including whether the Committee structure enhances Board and Committee performance
- Access to firm personnel
- Executive succession planning process
- Conduct of meetings, including time allocated for, and encouragement of, candid dialogue
- Materials and information, including quality, quantity and timeliness of information received from management, and suggestions for educational sessions
- Shareholder feedback

BOARD PERFORMANCE

- Key areas of focus for the Board
- Oversight of reputation
- Strategy oversight, including risks related thereto
- Consideration of shareholder value
- Capital planning

COMMITTEE PERFORMANCE

- Performance of Committee duties under Committee charter
- Oversight of reputation and consideration of shareholder value
- Effectiveness of outside advisors
- Identification of topics that should receive more attention and discussion

BOARD LEADERSHIP STRUCTURE

Current Board Leadership Structure

We review Board leadership structure annually. Conducting regular assessments allows our Board to discuss and debate whether the most efficient and appropriate leadership structure is in place to meet the needs of our Board and our firm, which may evolve over time. We are committed to independent leadership on our Board. If at any time the Chairman is not an independent director, our independent directors will appoint an independent Lead Director.

Strong Independent Lead Director — Combined Chairman-CEO: Why our Structure is Effective

In 2018, in connection with Mr. Blankfein's retirement and Mr. Solomon's assumption of the CEO role, our Governance Committee conducted a thorough review of our Board's leadership structure. The review considered a variety of factors, including our governance practices and shareholder feedback on our Board and its leadership structure, as described on the following page.

As a result of this review, our Governance Committee determined that after a transition period having Mr. Solomon serve as both Chairman and CEO — working together with a strong independent Lead Director — is the most effective leadership structure for our Board and our firm at this time.

Ultimately, we believe that our current leadership structure, together with strong governance practices, creates a productive relationship between our Board and management, including strong independent oversight that benefits our shareholders.

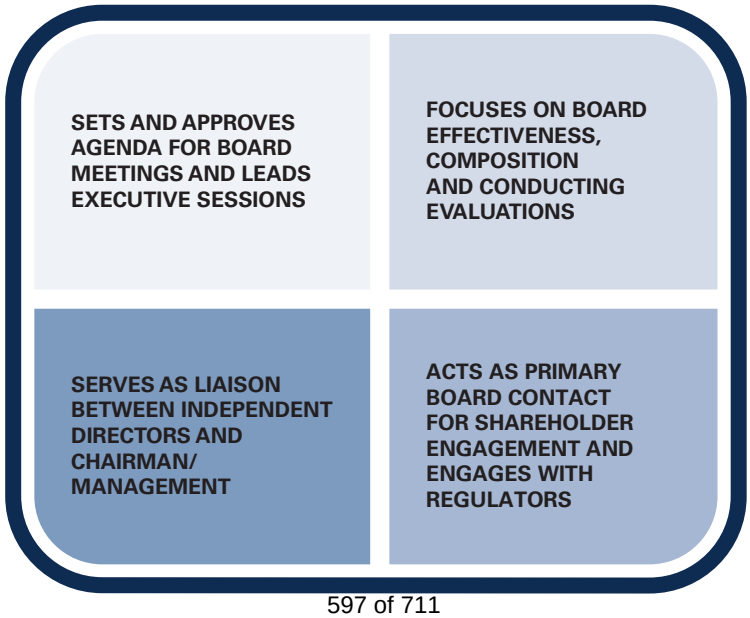
We will continue to conduct Board leadership assessments annually. If at any time our Governance Committee determines it would be appropriate to appoint an independent Chairman, it will not hesitate to do so.

KEY COMPONENTS OF REVIEW

- CHAIRMAN-CEO & LEAD DIRECTOR RESPONSIBILITIES
- POLICIES & PRACTICES TO ENSURE STRONG INDEPENDENT BOARD OVERSIGHT
- SHAREHOLDER FEEDBACK & VOTING RESULTS REGARDING BOARD LEADERSHIP
- FIRM PERFORMANCE
- TRENDS & DEVELOPMENTS REGARDING LEADERSHIP STRUCTURE

EMPOWERED LEAD DIRECTOR WITH EXPANSIVE LIST OF ENUMERATED DUTIES

Key Pillars of Lead Director Role



BENEFITS OF A COMBINED ROLE

- A combined Chairman-CEO structure provides our firm with a senior leader who serves as a primary liaison between our Board and management, and as the primary public face of our firm
  - » This structure demonstrates clear accountability to shareholders, clients and others
- Our CEO has extensive knowledge of all aspects of our current business, operations and risks, which he brings to Board discussions as Chairman
  - » A combined Chairman-CEO can serve as a knowledgeable resource for independent directors both at and between Board meetings
  - » Combining the roles at our firm has been effective in promoting strong and effective leadership of the firm, particularly in times of economic challenge and regulatory change affecting our industry

STRONG GOVERNANCE PRACTICES SUPPORT INDEPENDENT BOARD OVERSIGHT

- ✓ Nine independent directors and one non-employee director, the majority of which have executive-level experience
- ✓ Independent and engaged Chairs of all standing Committees
- ✓ Regular executive sessions of independent directors chaired by Lead Director supplemented by additional sessions of non-employee directors without management present
- ✓ All directors may suggest inclusion of additional subjects on agendas and any director may call an executive session
- ✓ Annual Board and Committee evaluations that include feedback on individual director performance
- ✓ Independent director participation and oversight of key governance processes, such as CEO performance, compensation and succession planning
- ✓ All directors free to contact any employee of the firm directly
- ✓ Our Chairman and CEO and our Lead Director meet and speak with each other regularly about our Board and our firm

SHAREHOLDER FEEDBACK & ENGAGEMENT

- We have generally received positive shareholder feedback on the nature of our Lead Director role and our annual leadership structure review
  - » In considering the strength of our Board leadership structure, many investors cite our Lead Director's extensive engagement with shareholders and the insight into the Board's perspectives and focus areas provided by the letter in our proxy statement that comes from our Lead Director
- Our Lead Director, Adebayo Ogunlesi, has engaged with the firm's shareholders and other key constituents, including our regulators, to discuss a variety of topics, including our Board leadership structure and his responsibilities as Lead Director, Board effectiveness, the Board's independent oversight of strategy, Board culture and Board and management succession planning
  - » In 2018, Mr. Ogunlesi met with 20 investors representing approximately 30% of our shares outstanding

Key responsibilities of our Chairman-CEO

- Chairs Board meetings
- Chairs annual shareholder meeting
- Serves as the public face of our Board and our firm
- Provides input to Lead Director on agenda for Board meetings (which the Lead Director sets and approves) and reviews schedule for Board meetings
- Guides discussions at Board meetings and encourages directors to voice their views
- Serves as a resource for our Board
- Communicates significant business developments and time-sensitive matters to our Board
- Establishes the "tone at the top" in coordination with our Board, and embodies these values for our firm
- Responsible for managing the day-to-day business and affairs of our firm
- Sets and leads the implementation of corporate policy and strategy
- Interacts regularly with our COO, CFO and other senior leadership of our firm
- Manages senior leadership of our firm
- Meets frequently with clients and shareholders, providing an opportunity to understand and respond to concerns and feedback; communicates feedback to our Board

Powers and duties of our Independent Lead Director

- Provides independent leadership
- Sets agenda for Board meetings, working with our Chairman (including adding items to and approving the agenda), and approves the form and type of related materials, as well as reviews and concurs in the agendas for each Committee meeting
- Approves the schedule for Board and committee meetings
- Presides at executive sessions of the independent directors
- Calls meetings of the Board, including meetings of the independent directors
- Presides at each Board meeting at which the Chairman is not present
- Engages with the independent directors and non-employee directors at and between Board and Committee meetings, including:
  - to identify matters for discussion, including for discussion at executive sessions of the independent directors
  - to facilitate communication with the Chairman (as set forth below)
  - one-on-one engagement regarding the performance and functioning of the collective Board, individual director performance and other matters as appropriate
- Serves as an adviser to the Chairman, including by:
  - engaging with the Chairman between Board meetings
  - facilitating communication between the independent directors and the Chairman, including by presenting the Chairman's views, concerns and issues to the independent directors as well as assisting with informing or engaging non-employee directors, as appropriate
  - raising to the Chairman views, concerns and issues of the independent directors, including decisions reached and suggestions made, at executive sessions, in each case as appropriate
- Oversees the Board's governance processes, including Board evaluations, succession planning and other governance-related matters
- Leads the annual CEO evaluation
- Meets directly with management and non-management employees of the firm
- Consults and directly communicates with shareholders and other key constituents, as appropriate

YEAR-ROUND REVIEW OF BOARD COMPOSITION

Our Governance Committee seeks to build and maintain an effective, well-rounded, financially literate and diverse Board that operates in an atmosphere of candor and collaboration.

In identifying and recommending director candidates, our Governance Committee places primary emphasis on the criteria set forth in our Corporate Governance Guidelines, including:

- Judgment, character, expertise, skills and knowledge useful to the oversight of our business;
- Diversity of viewpoints, backgrounds, work and other experiences and other demographics;
- Business or other relevant experience; and
- The extent to which the interplay of the candidate's expertise, skills, knowledge and experience with that of other members of our Board will build a strong and effective Board that is collegial and responsive to the needs of our firm.

Board Process for Identification and Review of Director Candidates to Join Our Board

Identifying and recommending individuals for nomination, election or re-election to our Board is a principal responsibility of our Governance Committee. The Committee carries out this function through an ongoing, year-round process, which includes the Committee's annual evaluation of our Board and individual director evaluations. Each director and director candidate is evaluated by our Governance Committee based on his or her individual merits, taking into account our firm's needs and the composition of our Board.

To assist in this evaluation, the Committee utilizes as a discussion tool a matrix of certain skills and experiences that would be beneficial to have represented on our Board and on our Committees at any particular point in time. For example, the Committee is focused on what skills are beneficial for service in key Board positions, such as Lead Director and Committee Chairs, and conducts a succession planning process for those positions.

Our Governance Committee welcomes candidates recommended by shareholders and will consider these candidates in the same manner as other candidates. Shareholders wishing to submit potential director candidates for consideration by our Governance Committee should follow the instructions in *Frequently Asked Questions*.

DIRECTOR EDUCATION

Director education about our firm and our industry is an ongoing process, which begins when a director joins our Board.

Upon joining our Board, new directors are provided with a comprehensive orientation about our firm, including our business, strategy and governance. For example, new directors typically meet with senior leaders covering each of our revenue-producing divisions and regions, as well as with senior leaders from key control-side functions.

New directors will also undergo in-depth training on the work of each of our Board's Committees, such as Audit and Risk Committee orientation sessions with our CFO, Controller, Treasurer and CRO, as well as a session with the Director of Internal Audit. Additional training is also provided when a director assumes a leadership role, such as becoming a Committee Chair.

Board and Committee presentations, roundtables, regular communications and firm and other industry events help to keep directors appropriately apprised of key developments in our businesses and in our industry, including material changes in regulation, so that they can carry out their oversight responsibilities.

COMMITMENT OF OUR BOARD

Commitment of our Directors – 2018 Meetings

Our Board and its Committees met frequently in 2018.

	2018 MEETINGS
Board	13
Audit	18
Compensation	7
Governance	7
Public Responsibilities	5
Risk	13
Executive Sessions of Independent Directors without Management*	5
Additional Executive Sessions of Non-Employee Directors without Management**	17

63

TOTAL BOARD AND COMMITTEE MEETINGS IN 2018

* Chaired by our Lead Director.

** Led by our independent Committee Chairs.

Each of our current directors attended over 75% (the threshold for disclosure under SEC rules) of the meetings of our Board and the Committees on which he or she served as a regular member during 2018. Overall attendance at Board and Committee meetings during 2018 was over 97% for our directors as a group.

We encourage our directors to attend our annual meetings. All of our directors who were members of the Board at the time attended the 2018 Annual Meeting.

Commitment of our Directors – Beyond the Boardroom

Engagement beyond the boardroom provides our directors with additional insights into our businesses, risk management and industry, as well as valuable perspectives on the performance of our firm, our CEO and other members of senior management.

The commitment of our directors extends well beyond preparation for, and attendance at, regular and special meetings.

ONGOING COLLABORATION	CONSTITUENT ENGAGEMENT	REGULARLY INFORMED
Frequent interactions with each other, senior management and key employees around the globe on topics including strategy, performance, risk management, culture and talent development	Regular engagement with key constituents, including regulators, and engagement with our shareholders. Participation in firm and industry conferences and other events on behalf of the Board	Receive postings on significant developments and weekly informational packages that include updates on recent developments, press coverage and current events that relate to our business, our people and our industry

Our Lead Director and Committee Chairs provide additional independent leadership outside the boardroom.

- For example, each Chair sets the agenda for his or her respective Committee meetings, and reviews and provides feedback on the form and type of related materials, in each case taking into account whether their Committee is appropriately carrying out its core responsibilities and focusing on the key issues facing the firm, as may be applicable from time to time. To do so, each Chair engages with key members of management and subject matter experts in advance of each Committee meeting.
- In addition, our Lead Director also sets the Board agenda (working with our Chairman) and approves the form and type of related materials. Our Lead Director also approves the schedule of Board and Committee meetings, taking into account whether there is sufficient time for discussion of all agenda items at each Board and Committee meeting.

In carrying out their leadership roles during 2018:

Lead Director *Adebayo Ogunlesi*	**Risk Chair** *Michele Burns / Mark Winkelman**	**Public Responsibilities Chair** *Bill George*	**Compensation Chair** *James Johnson / Michele Burns**	**Audit Chair** *Peter Oppenheimer*
Over **70** meetings	Over **40** meetings	Over **10** meetings	Over **30** meetings	Over **40** meetings
Includes meetings with: CEO, COO, CFO, Secretary to the Board, General Counsel, Shareholders, CRO, Treasurer, Director of Investor Relations, Regulators, Independent Director Compensation Consultant, Director Search Firm	**Includes meetings with:** CEO, COO, CFO, Secretary to the Board, CRO, Controller, Treasurer, Regulators, other key risk management and treasury employees	**Includes meetings with:** CEO, COO, Secretary to the Board, Regulators	**Includes meetings with:** CEO, COO, CFO, Secretary to the Board, General Counsel, Global Head of HCM, Global Head of Employee Experience, Global Head of Executive Compensation, Independent Compensation Consultant, Director of Investor Relations, Shareholders, Regulators	**Includes meetings with:** CEO, COO, CFO, Secretary to the Board, General Counsel, Controller, Treasurer, Director of Internal Audit, Head of Global Compliance, Regulators, Independent Auditors

* Chair transition during 2018.

Board Oversight of our Firm

KEY AREAS OF BOARD OVERSIGHT

Our Board is responsible for, and committed to, the oversight of the business and affairs of our firm. In carrying out this responsibility, our Board advises our senior management to help drive success for our clients and long-term value creation for our shareholders, and oversees management's efforts to ensure that the firm's cultural expectations are appropriately communicated and embraced throughout the firm. Our Board discusses and receives regular updates on a wide variety of matters affecting our firm.

CONSIDERATION OF OUR REPUTATION UNDERSCORES OUR BOARD AND COMMITTEE OVERSIGHT

Strategy

- Our Board oversees and provides advice and guidance to senior management on the formulation and implementation of the firm's strategic plans, including the development of growth strategies by our new senior management team.
  - » This occurs year-round through presentations and discussions covering firmwide, divisional and regional strategy, business planning and growth initiatives, both during and outside Board meetings.
- Our Board's focus on overseeing risk management enhances our directors' ability to provide insight and feedback to senior management, and if necessary to challenge management, on its development and implementation of the firm's strategic direction.
- Our Lead Director helps facilitate our Board's oversight of strategy by ensuring that directors receive adequate information about strategy and by discussing strategy with independent directors at executive sessions.

Risk Management

- In the normal course, our firm commits capital and otherwise incurs risk as an inherent part of serving our clients' needs. Our intention is to manage risks or, where possible, to mitigate them. In doing so, we endeavor not to undertake risks that could materially impair our firm, including our capital and liquidity position, ability to generate revenues and reputation.
- Management is responsible for the day-to-day identification, assessment, monitoring and decision-making regarding the risks we face. Our Board is responsible for overseeing the management of the firm's most significant risks on an enterprise-wide basis, which includes setting the types and levels of risk the firm is willing to take. This oversight is executed by our full Board as well as each of its Committees, in particular our Risk Committee, and is carried out in conjunction with the Board's oversight of firm strategy.

BOARD RISK MANAGEMENT OVERSIGHT INCLUDES:

- Strategic and financial considerations
- Legal, regulatory, reputational and compliance risks
- Other risks considered by Committees

RISK COMMITTEE RISK MANAGEMENT OVERSIGHT INCLUDES:

- Overall risk-taking tolerance and risk governance, including our Enterprise Risk Management Framework
- Our Risk Appetite Statement (in coordination with our full Board)
- Liquidity, market, credit, operational and model risks
- Our Capital Plan, capital ratios and capital adequacy
- Technology and cybersecurity risks, including oversight of management's processes, monitoring and controls related thereto

PUBLIC RESPONSIBILITIES COMMITTEE RISK MANAGEMENT OVERSIGHT INCLUDES:

- Brand and reputational risk, including client and business standards considerations, as well as the receipt of reports from the Firmwide Reputational Risk Committee regarding certain transactions that may present heightened reputational risk
- ESG risk

COMPENSATION COMMITTEE RISK MANAGEMENT OVERSIGHT INCLUDES:

- Firmwide compensation program and policies that are consistent with the safety and soundness of our firm and do not raise risks reasonably likely to have a material adverse effect on our firm
- Jointly with our Risk Committee, annual CRO compensation-related risk assessment

AUDIT COMMITTEE RISK MANAGEMENT OVERSIGHT INCLUDES:

- Financial, legal and compliance risk, in coordination with our full Board
- Coordination with our Risk Committee, including with respect to our risk assessment and risk management practices

GOVERNANCE COMMITTEE RISK MANAGEMENT OVERSIGHT INCLUDES:

- Board composition and Board and executive succession

REPUTATIONAL RISK MANAGEMENT

Spotlight on Reputational Risk Management

Over the past several years, our firm has taken a number of steps that have enhanced our Board's and our firm's oversight of reputational risk, including:

- **Conversion of our Board's Public Responsibilities Committee** into a standing committee with specific responsibility for oversight of our firm's reputation
- Development and **implementation of a Reputational Risk Framework** and formation of a management-level **Firmwide Reputational Risk Committee** and **control-side "regional vetting groups"** to review transactions with potential heightened reputational risks; numerous **transaction- and client-level controls** embedded in our firm's multi-faceted committee and working group structure
- **Training programs** for both the control side and the revenue side
- Implementation of a **comprehensive Enterprise Risk Framework**, including formation of a management- level Enterprise Risk Committee, a common firmwide risk taxonomy and risk dashboard, a revised Risk Appetite Statement that **addresses both financial and non-financial risks** and the enhancement of our "**three lines of defense**" structure
- Development of **regular metrics for our Board** that track data on conduct, controls, business integrity matters and other key metrics
- Enhancement and realignment of our firm's **Compliance function**, as well as the implementation of wide-ranging programs to **strengthen the stature and authority of the control-side functions**

CEO Performance

- Under the direction of our Lead Director, our Governance Committee annually evaluates CEO performance.
  - » The evaluation process includes an executive session of independent directors, a closed session with our CEO and additional discussions between our Lead Director and our CEO throughout the year.
- The Committee reviews the results of our CEO's evaluation under our "360 degree" review process (360° Review Process, as described further on page 41) and also assesses our CEO's performance both as CEO and as Chairman of the Board against the key criteria and responsibilities for these roles that were developed by our Governance Committee.
- In light of our recent CEO transition, in December 2018 the Governance Committee evaluated each of Mr. Solomon and Mr. Blankfein in accordance with this process.

Executive Succession Planning

- Our Governance Committee has long utilized a framework relating to executive succession planning under which the Committee has defined specific criteria for, and responsibilities of, each of the CEO, COO and CFO roles. The Committee then focuses on the particular skill set needed to succeed in these roles at our firm both on a long-term and an emergency basis.
- Our Lead Director also meets on this topic separately with our CEO and facilitates additional discussions with our independent directors about executive succession planning throughout the year, including at executive sessions.
- Even after our recent executive transitions, succession planning remains a priority for our Governance Committee, which has worked with Mr. Solomon to ensure an appropriate emergency succession protocol and to develop our long-term succession plan.

Financial Performance & Reporting

- Our Board, including through its Committees, is continually kept apprised by management of the firm's financial performance and key drivers thereof. For example, our Board generally receives an update on financial performance from our CFO at each meeting, which update provides critical information to the Board and its Committees that assists them in carrying out their responsibilities.
- Our Board, through its Audit Committee, is responsible for overseeing management's preparation and presentation of our annual and quarterly financial statements and the effectiveness of our internal control over financial reporting.
  - » Each quarter, our Audit Committee meets with members of our management, the Director of Internal Audit and our independent registered public accounting firm to review and discuss our financial statements, as well as our quarterly earnings release.
- In addition, our Audit Committee is directly responsible for overseeing the independence, performance and compensation of our independent registered public accounting firm. In this regard, our Audit Committee and Audit Committee Chair are directly involved with the periodic selection of the lead engagement partner (see *Audit Matters—Item 3. Ratification of PwC as our Independent Registered Public Accounting Firm for 2019*).

Culture & Conduct

Our Board places significant focus in its oversight duties on reputational risk and management's operation of the firm responsibly for the long-term.

- Oversight of the firm's culture is an important element of our Board's oversight of the firm's reputation, particularly because our people are our greatest asset. Our culture and the conduct we expect from our people is embedded in, and stems from, our Business Principles and our Code of Business Conduct and Ethics (which are available on our website at www.gs.com).
- Our Board sets the "tone at the top," and holds senior management accountable for embodying, maintaining and communicating a culture that emphasizes the importance of compliance with both the letter and spirit of the laws, rules and regulations that govern us.
- This is carried out at our Board and across our Committees through a variety of means, including oversight of strategy, the receipt of metrics (such as with respect to conduct and business integrity matters, voluntary attrition and complaints, if any, in the retail consumer business), regular discussions with the firm's Compliance, Legal, Risk and Internal Audit functions, oversight of CEO and senior management performance and compensation, and discussion of "lessons learned" from firm or industry events, as appropriate.
  - » These are topics on which our firm regularly engages with our shareholders, regulators and other constituents.

Chairman's Forum: 44 sessions in 8 cities globally between September 2017 and November 2018 focusing on conduct, culture and reputational risk management.

Spotlight on Diversity: Under Board oversight, our firm is committed to greater diversity in our hiring and promotion decisions to sustain and enhance our culture.

Shareholder Engagement

Commitment to Active Engagement with our Shareholders and Other Constituents

Constituents' views regarding matters affecting our firm are important to our Board. We employ a year-round approach to engagement that includes proactive outreach as well as responsiveness to targeted areas of focus.

Our Approach

We engage on a year-round basis with a wide range of constituents, including shareholders, ESG rating firms, fixed income investors, proxy advisory firms, prospective shareholders and thought leaders, among others. We also conduct additional targeted outreach ahead of our annual meeting each year, and otherwise as needed.

Firm engagement is led by our Investor Relations team, including targeted outreach and open lines of communication for inbound inquiries. Board-level engagement is led by our Lead Director, who meets regularly with shareholders and other key constituents, and may include other directors as appropriate. Feedback is provided to all directors from these interactions to inform Board and Committee work.

Depth of Engagement

We continued to conduct year-round, proactive engagement on corporate governance matters in 2018:

- Targeted outreach to top 200 shareholders ahead of 2018 Annual Meeting
- IR met with shareholders representing more than 40% of Common Stock outstanding during 2018
- Lead Director and/or Compensation Committee Chair met with 20 investors in 2018, representing approximately 30% of Common Stock outstanding

2018 engagement covered:

DIVERSITY	ENVIRONMENTAL & SOCIAL RISK MANAGEMENT	SUSTAINABILITY OF OUR OPERATIONS	CLIMATE CHANGE
Example: Goal of 50% women in incoming analyst class by 2021	**Example:** Evaluation of environmental risks in financing transactions	**Example:** Programs to increase resource conservation	**Example:** Progress toward our $150bn clean energy target

Our Board's Public Responsibilities Committee has primary oversight of the firm's approach to ESG, which includes reviewing key ESG-related policies such as our Environmental Policy Framework and our annual ESG Report. Other ESG matters are also reviewed by the full Board or its other Committees as part of their respective mandates.

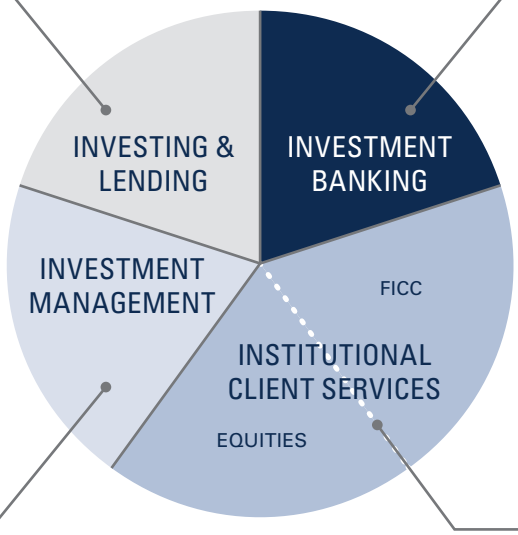
Spotlight on Sustainability: An Integrated Approach

Sustainability is integrated across our firm. It encompasses how we drive commercial solutions, manage our operations, recruit and support our people and engage philanthropically within our communities.

Managing ourselves responsibly, and leveraging our business model to drive sustainability-related commercial solutions for clients, will underpin our ability to drive shareholder value creation over time.

More information can be found in our annual sustainability report, available at **www.gs.com/esg-report**. Our 2018 report will be available at the end of April 2019.

- Investment capital enables providers of critical goods and services to grow and scale
- Targeted programs and businesses that invest capital in women-owned funds and economically underserved areas
- Evolution of ESG in investments including identifying opportunities to improve ESG practices for corporations, infrastructure and real estate investments
- $7.6 billion investments in underserved markets since 2001



- Capital from underwriting activity enables providers of critical goods and services—including clean energy, sustainable infrastructure, healthcare services and education—to grow and scale
- Leading underwriter of green, social and sustainability bonds; ~$35 billion underwritten since 2014
- $19 billion structured in weather-related catastrophe bonds since 2006

- Rapidly-growing ESG and impact investing platform with ~$17 billion assets under supervision as of 2018 year-end
- Active stewardship through voting and engagement across our products and investment strategies

- Help clients manage commodity risks inherent in clean energy transition
- ~4,000 companies covered by GS SUSTAIN's ESG investment research framework
- Custom ESG Index creation, including in partnership with Euronext and CDP

Environmental & Social Risk Management

- Comprehensive policies that guide our approach to environmental and social risk management codified in our *Environmental Policy Framework*.
- Assessment of environmental and social risk is integrated into transactional due diligence process; as appropriate, we engage with companies to understand and mitigate potential risk factors.
- Nearly 1,300 transactions reviewed in 2018 by the Environmental Markets Group.

Key Priorities / Targets

- $150 billion of capital deployment toward clean energy by 2025.
  - » $80 billion progress at 2018 year-end.
- Target $2 billion in green operational investments by 2020.
- Committed to invest $500 million in women-founded, women-led and women-owned businesses.
- Achieved carbon neutrality across our own operations from 2015 onwards. On track to meet our 100% renewables goal for our global electricity needs by 2020.
- Goal of 50% representation of women in incoming analyst class by 2021 as part of commitment to have women represent 50% of our global talent over time.

Compensation Matters

Compensation Discussion and Analysis

2018 NEO COMPENSATION DETERMINATIONS

The following table shows our Compensation Committee's determinations regarding our NEOs' 2018 annual compensation as well as 2017 information for those individuals who were NEOs in that year (dollar amounts shown in millions). This table is different from the SEC-required 2018 Summary Compensation Table on page 58. Our NEOs include our Executive Leadership Team (Messrs. Solomon, Waldron and Scherr) and Mr. Blankfein. Our other NEOs are R. Martin Chavez, Richard Gnodde and Timothy O'Neill, who served as Vice Chairmen during all or part of 2018.

	YEAR	SALARY/ FIXED ALLOWANCE ($)[a]	ANNUAL VARIABLE COMPENSATION ($)			TOTAL ($)	EQUITY-BASED AWARDS AS % OF ANNUAL VARIABLE COMP.	EQUITY-BASED AWARDS AS % OF TOTAL
			CASH	PSUS[a]	RSUS[a]			
EXECUTIVE LEADERSHIP TEAM								
David M. Solomon Chairman and CEO	2018	1.89	5.70	15.41	—	23.00	73	67
	2017	1.85	5.75	13.41	—	21.00	70	64
John E. Waldron President and COO	2018	1.59	6.81	11.60	—	20.00	63	58
Stephen M. Scherr Executive Vice President and CFO	2018	1.56	6.08	10.36	—	18.00	63	58
OTHER NEOS[b]								
R. Martin Chavez	2018	1.85	4.55	—	10.61	17.00	70	62
	2017	1.73	5.18	12.09	—	19.00	70	64
Richard J. Gnodde[c]	2018	1.85/8.15	—	—	9.00	19.00	100	63
	2017	1.85/8.15	—	—	9.00	19.00	100	63
Timothy J. O'Neill	2018	1.59	6.44	—	10.97	19.00	63	58
RETIRED CEO								
Lloyd C. Blankfein	2018	2.00	4.26	—	14.25	20.50	77	69
	2017	2.00	4.40	17.60	—	24.00	80	73

(a) Salaries for Messrs. Solomon, Waldron, Scherr and O'Neill were increased at the time of their respective changes in role/title. The number of PSUs or RSUs awarded as part of our NEOs' 2018 annual compensation was determined by reference to the closing price of our Common Stock on the grant date ($199.09 on January 17, 2019). This resulted in grants as follows: Mr. Solomon – 77,413 PSUs; Mr. Waldron – 58,265 PSUs; Mr. Scherr – 52,033 PSUs; Mr. Chavez – 53,268 RSUs; Mr. Gnodde – 15,094 RSUs (in respect of his fixed allowance) and 48,863 RSUs (in respect of his variable compensation); Mr. O'Neill – 55,101 RSUs; and Mr. Blankfein – 71,551 RSUs. (For additional information regarding Mr. Gnodde's grant, see footnote (c).)

(b) Effective January 1, 2019, Messrs. Chavez, Gnodde and O'Neill no longer hold the title or the role of Vice Chairman, which title and role have been discontinued, and are no longer executive officers of the firm.

(c) For each of 2018 and 2017, Mr. Gnodde, who is based in the U.K., received a cash salary of $1.85 million and a fixed allowance of $8.15 million, payable approximately 37% in equity-based awards, with the remainder in cash. Mr. Gnodde received a higher level of fixed compensation than our U.S.-based NEOs as a result of applicable U.K. regulations. See page 49 for more details. Generally, RSUs awarded to our employees include a right to receive dividend equivalent payments. However, under applicable U.K. regulations, RSUs granted to Mr. Gnodde and certain other U.K. employees in respect of their variable compensation for 2018 and 2017 cannot include this right and therefore do not have the same value as awards granted to our other employees. To make up for this relative loss in value, affected U.K. employees receive additional RSUs (Additional RSUs). In this regard, for 2018 Mr. Gnodde received 3,657 Additional RSUs (which are reflected in the amounts described in footnote (a)). See page 51 for more detail regarding the terms of these Additional RSUs.

HOW OUR COMPENSATION COMMITTEE MADE ITS DECISIONS

- Our Compensation Committee made its annual compensation determinations for our NEOs in the context of our Compensation Principles, which encompass a pay for performance philosophy, and after consideration of a number of other factors, including stakeholder feedback (see pages 46-48 for more detail).
- The Committee believed it was appropriate to reward our Executive Leadership Team and other NEOs for the firm's strong improvement in operating performance in 2018 as well as their outstanding individual performance.
  - » The Committee considered firmwide performance in a holistic manner without ascribing specific weight to any single financial metric, and considered a number of factors, including ROE, BVPS, EPS, net revenues and pre-tax earnings in making compensation determinations (including, where appropriate, adjusted to reflect the impact of U.S. Tax Legislation).
  - » In particular, the Committee focused on the firm's ROE (on an absolute and relative basis), BVPS growth and EPS growth in assessing firmwide performance.
  - » In addition, the Committee considered the firm's year-over-year growth in net revenues and pre-tax earnings as indicators of management's ability to grow the firm's business in a cost-effective manner.
- Given that many of our NEOs served in more than one role during 2018, the Committee took into account a number of factors in determining their 2018 compensation, including their responsibilities, length of service in their prior and new roles, historical compensation, both for these individuals and with respect to these roles, and an analysis of prior year peer compensation.
  - » Thus, the 2018 compensation amounts awarded to the members of our Executive Leadership Team are below the 2017 levels for the individuals who had previously served in those roles, mainly because the Executive Leadership Team did not serve in their new roles for the entire year.
- Given that the NEOs' role changes occurred during 2018, the Committee also determined it was appropriate to adjust the percentage of year-end variable compensation paid in the form of equity-based awards up or down from their 2017 levels, taking into account the amount of time each executive spent in his prior role vs. his new role (e.g., 73% for Mr. Solomon on a pro rata basis given he served as our CEO for one-quarter of 2018).

KEY FIRMWIDE PERFORMANCE METRICS CONSIDERED BY OUR COMPENSATION COMMITTEE

+190 bps*	Our **ROE (Ex. U.S. Tax Legislation)**** was 12.7% for 2018, the highest since 2009
+15%*	Our **BVPS** was $207.36 at year-end 2018
+22%*	Our **EPS (Ex. U.S. Tax Legislation)**** was $24.02 for 2018
+12%*	**Net revenues** increased to $36.6 billion, the highest since 2010
+12%*	Our **pre-tax earnings** increased to $12.5 billion, the highest since 2010

* Reflects change vs. 2017.

** For a reconciliation of these non-GAAP measures with the corresponding GAAP measures, please see *Annex A*.

Say on Pay & Shareholder Engagement

- **2018 Say on Pay Results.** Our 2018 Say on Pay vote received the support of **approximately 88%** of our shareholders, which the Compensation Committee viewed positively.
- **Extensive Shareholder Engagement.** In light of our Board's desire to continue to prioritize shareholder engagement, we (including, in certain cases, our Lead Director and the Chair of our Compensation Committee) **met with shareholders representing more than 40% of Common Stock outstanding** to discuss compensation-related matters and other areas of focus.
- **Board Responsiveness.** The feedback we received in these discussions informed our Board and our Compensation Committee's actions for 2018:

STAKEHOLDER FEEDBACK	COMPENSATION COMMITTEE ACTION
Support for use of PSUs for current Executive Leadership Team	**Equity-based annual compensation for our Executive Leadership Team continues to be paid entirely in PSUs**
Support for high proportion of CEO annual variable compensation tied to ongoing performance metrics	**73% of CEO's 2018 annual variable compensation tied to ongoing performance metrics (compared to U.S. Peer average of approximately 55%)**
Focus on aspirational PSU goals	**PSU thresholds increased:** ■ **Absolute ROE threshold for maximum payout increased from 14% to 16%** ■ **Target for 100% payout under relative ROE goals now requires above median performance (increased from 50th percentile to 60th percentile)** ■ **Minimum absolute ROE threshold for any payout increased from 4% to 5%** ***(For additional key facts about our PSUs, see page 39)***
Support for proactive engagement	■ **Continued emphasis on shareholder engagement** ■ **Commitment to engagement by Lead Director and Compensation Committee Chair**

2018 Year-End PSUs – Key Facts

- PSUs represent 100% of the 2018 year-end equity-based compensation granted to our Executive Leadership Team (who have ultimate responsibility for firmwide performance and are uniquely positioned to drive our strategic plan).
- PSUs will be paid at 0-150% of the initial award based on our average ROE over 2019–2021, using the increased absolute and relative metrics described in the below table.
  - » Performance thresholds were made more aspirational for 2018 awards; see below for additional detail.
- For purposes of the relative ROE metric, our peer group consists of Bank of America, Citigroup, JPMorgan Chase, Morgan Stanley, Barclays, Credit Suisse, Deutsche Bank and UBS (i.e., our U.S. Peers and European Peers).
  - » Our Compensation Committee continues to believe that this peer group is appropriate given that it comprehensively reflects those firms that have a significant presence across our collection of businesses (including market making, investment banking and investment management) and who have regulatory requirements similar to ours.
- After the end of the performance period, the PSUs will settle one-half in cash and one-half in "Shares at Risk" (i.e., stock received from PSUs (after applicable tax withholding) will be subject to transfer restrictions through January 2024, five years from the grant date).
- PSUs and, in certain cases, underlying Shares at Risk provide for forfeiture or recapture in a number of situations. For more detail on our forfeiture and recapture provisions, see pages 53-54.

3-YEAR AVERAGE ABSOLUTE ROE	% EARNED
<5% (Increased)	0%
5% to <16% (Increased)	Based on relative ROE; see scale at right
≥16% (Increased)	150%

3-YEAR AVERAGE RELATIVE ROE	% EARNED*
<25th percentile	25%
25th percentile	50%
60th percentile (Increased)	100%
≥ 75th percentile	150%

* % earned is scaled if performance is between specified thresholds

INCREASED PERFORMANCE THRESHOLDS

- **Increased ROE Thresholds.** In response to stakeholder feedback on the importance of aspirational PSU goals and to reflect the impact of both U.S. Tax Legislation and our financial performance, our Compensation Committee determined it was appropriate to make the following changes to our PSU performance thresholds:
  - » **Absolute ROE threshold for maximum payout** was increased to 16% (from 14%).
    - – For illustrative purposes, the highest three-year average reported ROE achieved by us or any of our U.S. Peers or European Peers over any period since 2010 was 11.2%, nearly 500 basis points below the 16% required for maximum payout.
  - » **Target for 100% payout under relative ROE goals** now requires above median performance (increased from 50th percentile to 60th percentile).
  - » **Minimum absolute ROE threshold** for any payout was increased to 5% (from 4%).

2018 Firmwide Performance

Our Compensation Committee places substantial importance on firmwide performance when assessing NEO compensation amounts.

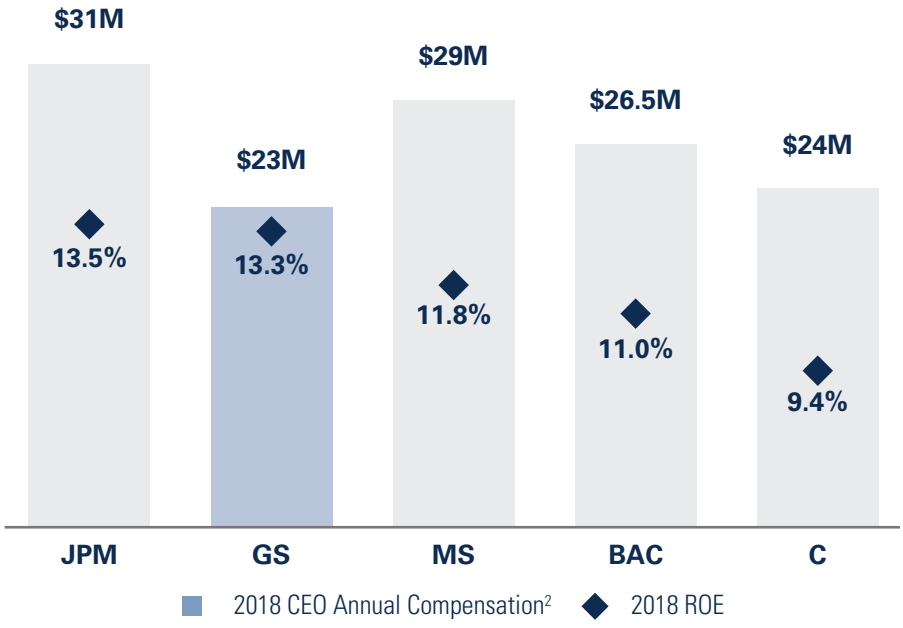
Key factors the Committee considered included:

- The firm's strong operating performance, including:
  - The firm's returns, which were the highest in nearly a decade and outperformed the average for U.S. and European Peers;
  - A 22% increase in EPS (excluding the impact of the charge related to U.S. Tax Legislation in 2017 and the related benefit in 2018), the firm's highest net revenues since 2010 and a 12% increase in pre-tax earnings; and
  - Management's continued focus on expense discipline while investing for future growth, with operating expenses rising in line with revenues despite substantial investments in new business initiatives and innovative technology.
- The strength of our client franchise, including:
  - The firm's sustained strength in Investment Banking, including our continued #1 position in announced and completed M&A, #1 ranking in equity and equity-related offerings, and strong positioning in debt underwriting (including #2 in high yield);
  - Success in our Investment Management business, including record 2018 net revenues; and
  - Strong wallet share with institutional clients in our market-making businesses, ranking #2 across our Institutional Client Services franchise.[1]

In assessing our firmwide performance, the Committee reviewed ROE, BVPS, EPS, net revenues and pre-tax earnings, as well as net earnings, stock price performance, compensation and benefits expense, non-compensation expense and Compensation Ratio. All metrics were considered on a year-over-year basis, as well as, where relevant, relative to our U.S. Peers and European Peers, and in the context of the broader environment in which the firm operates, on a reported and Ex. U.S. Tax Legislation basis, as applicable.

- We believe peer comparability is an important factor in assessing our pay for performance alignment.
- The chart at right provides additional information on our pay for performance alignment in the context of 2018 annual CEO pay determinations and annual ROE for each of our U.S. Peers.

2018 CEO Annual Compensation: U.S. Peer Comparison



[1] Wallet share and ranking through first nine months of 2018 as full-year data not available. Source: Coalition.

[2] For GS, 2018 annual compensation is shown for Mr. Solomon, our current CEO. Annual compensation includes base salary, cash year-end variable compensation paid and deferred cash/equity-based awards granted, in each case for 2018 performance, as reported in SEC filings for each of our peers.

2018 Individual Performance

In determining each of our NEO's 2018 annual compensation, our Compensation Committee also considered each NEO's key individual performance highlights and achievements. Our NEOs are evaluated under our 360° Review Process, which includes feedback in key areas such as those summarized in the graphic below:

CEO

Under the direction of our Lead Director, our Governance Committee evaluated the performance of Messrs. Solomon and Blankfein, including a summary of their evaluations under the 360° Review Process (see page 32 for more detail). Our Compensation Committee considered these evaluations and also discussed Messrs. Solomon's and Blankfein's performance as part of its executive session to determine their compensation.

Other NEOs

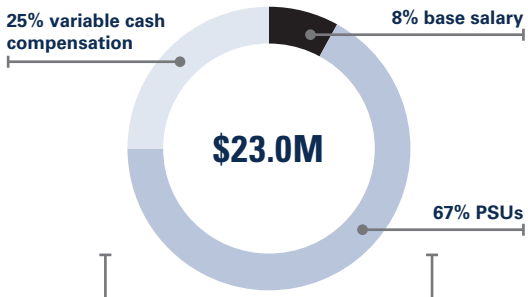
Mr. Solomon discussed the performance of our other NEOs, including a summary of their evaluations under the 360° Review Process, with our Compensation Committee. In addition, Mr. Solomon submitted variable compensation recommendations to the Committee for these other NEOs, but did not make recommendations about his own compensation.

David M. Solomon

Chairman and CEO
(previously served as President and COO)

KEY RESPONSIBILITIES & PERFORMANCE ACHIEVEMENTS	2018 ANNUAL COMPENSATION

- As Chairman and CEO, Mr. Solomon is responsible for managing our business operations and overseeing our firm, leading development and implementation of corporate policy and strategy and serving as primary liaison between our Board and the management of the firm.
- Successfully transitioned to this new role and guided the firm through the transition of various executive roles, including our COO and CFO.
- Enhanced our "One Firm" approach to client engagement, creating a senior leadership group focused on more effectively bringing the firm's full set of capabilities to clients.
- Demonstrated broad, active and productive engagement with clients in all regions and divisions.
- As part of the firm's client-centric strategy for future growth, drove a front-to-back review of the firm's existing businesses and demonstrated accountability for the growth initiatives we publicly announced in September 2017.
- Deeply committed to fostering key values of the firm, including diversity and people initiatives; critical role in the creation and oversight of the firm's Global Diversity Committee.
- In addition to his role as the leader of our organization and people, also serves as the primary public face of our firm.



Mr. Solomon's compensation was determined based on his new responsibilities and tenure as CEO, his performance as President and COO and firmwide and individual performance.

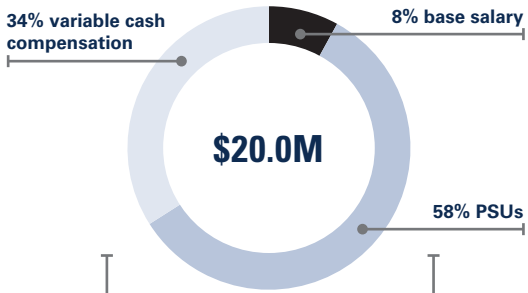
John E. Waldron

President and COO
(previously served as Co-Head of the Investment Banking Division)

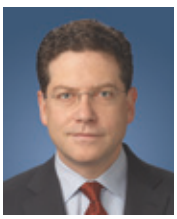
KEY RESPONSIBILITIES & PERFORMANCE ACHIEVEMENTS

- As President and COO, manages our day-to-day business operations and executes on firmwide priorities; closely collaborates with our CFO on issues relating to risk management, firmwide operations and client focus, among others.
- Successfully transitioned to this new role, including by effectively partnering with our CEO and CFO to develop and execute the firm's strategy.
- Spearheaded an initiative to deliver holistic service to global clients across all of our businesses and maintain appropriate attention to reputational risk, in particular through his chairmanship of the Firmwide Client and Business Standards Committee and Firmwide Reputational Risk Committee.
- As Co-Head of Investment Banking, played a critical role in sustaining and enhancing our global position in M&A and underwriting, including devoting significant time and attention to the development of our client franchise.
- Drove the review and improvement of various people initiatives, including the PMD selection process; our 2018 PMD class includes the highest percentage of women and black partners in the firm's history.
- Serves as a key liaison to our clients and other constituents.

2018 ANNUAL COMPENSATION



Mr. Waldron's compensation was determined based on his new responsibilities and tenure as President and COO, the performance of the Investment Banking Division and firmwide and individual performance.



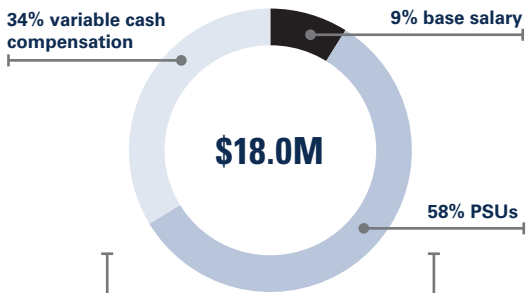
Stephen M. Scherr

Executive Vice President and CFO
(previously served as CEO of Goldman Sachs Bank USA and Head of the Consumer and Commercial Banking Division (CCBD))

KEY RESPONSIBILITIES & PERFORMANCE ACHIEVEMENTS

- As CFO, manages the firm's overall financial condition, as well as financial analysis and reporting, and oversees our operations and technology functions; closely collaborates with our COO on issues relating to risk management, firmwide operations and client focus, among others.
- Successfully transitioned to this new role, including through his involvement in critical control functions relating to risk, capital, liquidity and reputational matters and effectively partnering with our CEO and COO to develop and execute the firm's strategy.
- Played a key role in leading the firm's stakeholder dialogue, in particular as a champion of providing greater transparency to investors.
- Devoted significant attention to oversight of the financial risks faced by the firm, including as Co-Chair of the Firmwide Risk Committee.
- As CEO of Goldman Sachs Bank USA and Head of CCBD, led our effort to build a significant digital consumer business that represents a meaningful growth opportunity for the firm, including the successful launch of Marcus in the U.K.
- Serves as a primary liaison to our investors.

2018 ANNUAL COMPENSATION*

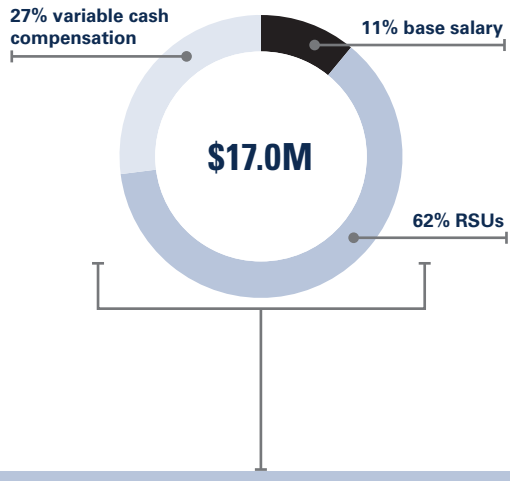


Mr. Scherr's compensation was determined based on his new responsibilities and tenure as Executive Vice President and CFO, the performance of CCBD and firmwide and individual performance.

* Percentages do not add to 100% due to rounding.

R. Martin Chavez

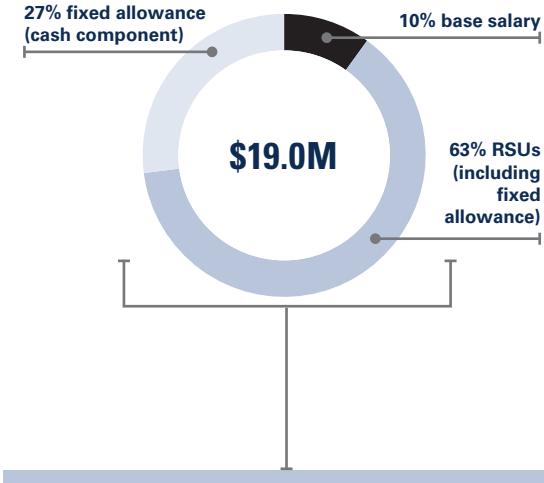
Co-Head of the Securities Division *(previously served as a Vice Chairman and as Executive Vice President and CFO)*

KEY RESPONSIBILITIES & PERFORMANCE ACHIEVEMENTS	2018 ANNUAL COMPENSATION
■ Effectively transitioned to his new role as Co-Head of the Securities Division, leveraging technical knowledge and understanding of the markets to drive greater client impact and operational efficiency. ■ Served as a point of contact with a broad group of regulators on a range of issues impacting our firm, our clients and the industry. ■ Devoted significant attention to oversight of the financial risks faced by the firm, including as Co-Chair of the Firmwide Risk Committee. ■ Continued to be a highly effective spokesperson for, and champion of, diversity both internally and externally.	

Mr. Chavez's compensation was determined based on his responsibilities and tenure as Executive Vice President and CFO and his transition out of such role, the performance of the Securities Division and firmwide and individual performance.

Richard J. Gnodde

CEO of Goldman Sachs International *(previously served as a Vice Chairman)*

KEY RESPONSIBILITIES & PERFORMANCE ACHIEVEMENTS	2018 ANNUAL COMPENSATION
■ Continued to be an outstanding leader in the firm's businesses in the EMEA and APAC regions, effectively connecting with clients, government officials and regulators. ■ Played a key role in articulating and executing on a clear growth strategy for the EMEA and APAC regions, with a focus on driving further revenue growth. ■ Dedicated significant time and energy to addressing issues related to Brexit across a number of constituencies, including our people and our clients. ■ Remained focused on issues relating to culture, conduct and reputational risk management and promoting a culture of compliance.	

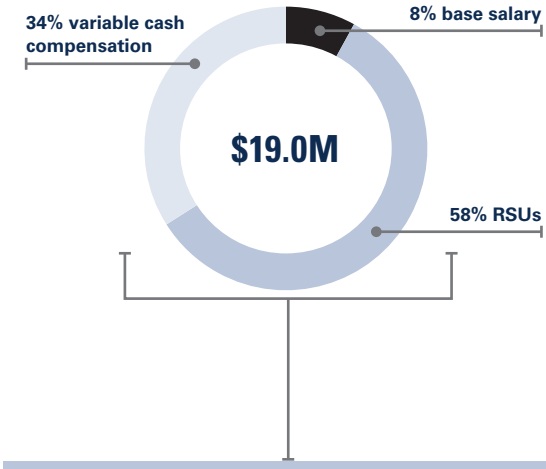
Mr. Gnodde's compensation was determined based on firmwide, regional and individual performance.

Timothy J. O'Neill

Co-Head of the Consumer and Investment Management Division
(previously served as a Vice Chairman)

KEY RESPONSIBILITIES & PERFORMANCE ACHIEVEMENTS	2018 ANNUAL COMPENSATION

- As Co-Head of the Consumer and Investment Management Division, demonstrated strong leadership and oversight of the execution of the firm's strategy.
- Drove a record level of Assets under Supervision and the further expansion of the investment platform both organically and through acquisitions.
- Deeply engaged with clients and valued for his perspective and understanding of the markets, the industry and wealth management strategies.
- Served as a strong culture carrier and advocate of the firm's diversity efforts in the Americas, including through his role as Co-Chair of the Americas Diversity Committee.



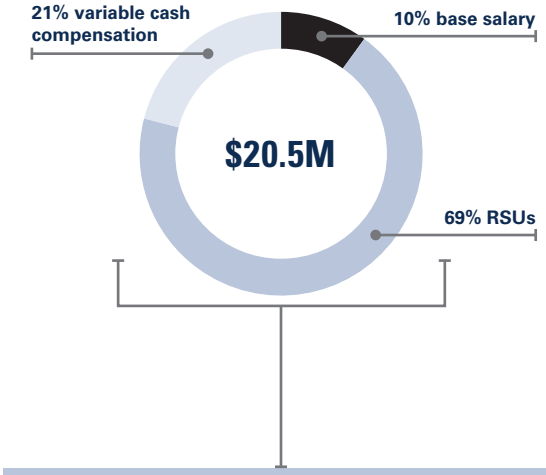
Mr. O'Neill's compensation was determined based on firmwide performance, the performance of the Consumer and Investment Management Division and individual performance.

Lloyd C. Blankfein

Former Chairman and CEO

KEY RESPONSIBILITIES & PERFORMANCE ACHIEVEMENTS	2018 ANNUAL COMPENSATION

- Played an integral role in developing and executing the firm's plan for succession, facilitating a smooth transition to new leadership.
- Continued to demonstrate high levels of engagement with and commitment to clients across all divisions, including through hundreds of one-on-one meetings.
- Served as a crucial point of contact with government officials and the media on key matters impacting our firm, the industry and the global economy.
- Maintained an intense focus on culture, conduct and reputational risk management, including through the 2018 Chairman's Forum.



Mr. Blankfein's compensation was determined based on firmwide and individual performance, as well as his retirement as CEO effective September 30, 2018 and as Chairman effective December 31, 2018.

KEY PAY PRACTICES

Our Compensation Committee believes the design of our executive compensation program is integral in furthering our Compensation Principles, including paying for performance and effective risk management. The following chart summarizes certain of our key pay practices.

What We Do

- ✓ Engage proactively with shareholders and other constituents (see page 34)
- ✓ Review and carefully consider stakeholder feedback in structuring and determining executive compensation
- ✓ Grant equity-based awards as a significant portion of our NEOs' annual variable compensation (for 2018 at least 63%)
- ✓ Align pay with firmwide performance, including through use of PSUs and RSUs
- ✓ Tie 100% of equity-based compensation granted to our current Executive Leadership Team to ongoing performance metrics
- ✓ Apply significant shareholding requirements through:
  - » Stock Ownership Guidelines
  - » Retention requirements
  - » "Shares at Risk" underlying year-end equity-based awards; transfer restrictions generally apply for five years after grant date to all or substantially all shares delivered to our NEOs (after applicable tax withholding), in most cases even if the NEO leaves our firm
- ✓ Exercise judgment responsive to the cyclical nature of our business, including consideration of appropriate risk-based metrics
- ✓ Maintain a clawback policy that applies to variable compensation awards
- ✓ Provide for annual assessment by our CRO of our compensation programs to ensure programs do not encourage imprudent risk-taking
- ✓ Utilize an independent compensation consultant

What We Don't Do

- ✘ No employment, "golden parachute" or other agreements providing for severance pay with our executive officers
- ✘ No guaranteed bonus arrangements with our executive officers
- ✘ No tax gross-ups for our executive officers
- ✘ No repricing of underwater stock options without shareholder approval
- ✘ No excessive perquisites
- ✘ No ongoing service-based pension benefit accruals for executive officers
- ✘ No hedging transactions or short sales of our common stock permitted for any executive officer

FRAMEWORK FOR COMPENSATION DECISIONS

Our Compensation Committee continues to believe that, in order to achieve our overarching goal of enhancing shareholder value while promoting the safety and soundness of our firm, it is important to retain discretion to determine compensation forms and amounts for our senior executives, while tying compensation to ongoing performance metrics where appropriate. Our business is dynamic and requires us to respond rapidly to changes in our operating environment. A rigid, formulaic program based solely on metrics without the use of discretion could hinder our ability to do so. Equity-based awards comprise a significant portion of annual variable compensation for our NEOs and help to ensure long-term alignment without the disadvantages of purely formulaic compensation.

Our Compensation Committee has responded to stakeholder feedback by changing our executive compensation program over time, which has helped to ensure that our program continues to be appropriately aligned with our Compensation Principles and shareholder expectations.

Our Compensation Principles

Our Compensation Principles guide our Compensation Committee in its review of compensation at our firm, including the Committee's determination of NEO compensation. The full text of our Compensation Principles is available on our public website at www.gs.com/corpgov. Key elements of our Compensation Principles include:

PAYING FOR PERFORMANCE	ENCOURAGING FIRMWIDE ORIENTATION & CULTURE	DISCOURAGING IMPRUDENT RISK-TAKING	ATTRACTING & RETAINING TALENT
Firmwide compensation should directly relate to firmwide performance over the cycle.	Employees should think and act like long-term shareholders, and compensation should reflect the performance of the firm as a whole.	Compensation should be carefully designed to be consistent with the safety and soundness of our firm. Risk profiles must be taken into account in annual performance reviews, and factors like liquidity risk and cost of capital should also be considered.	Compensation should reward an employee's ability to identify and create value, but the recognition of individual performance should be considered in the context of the competitive market for talent.

Compensation Committee Framework Regarding NEO Compensation

In addition to our Compensation Principles, our Compensation Committee is guided by our Compensation Framework, which more broadly governs the variable compensation process for employees who could expose the firm to material amounts of risk (such as our NEOs). The Committee considered the following factors in determining the amount and form of compensation to be awarded to each of our NEOs (firmwide performance and individual performance are discussed above on pages 40-44):

Stakeholder Feedback

- In making NEO compensation decisions, our Compensation Committee reviews and carefully considers:
  - » Specific feedback received from shareholders and other constituents; and
  - » The results of our Say on Pay votes.
- Our 2018 Say on Pay vote received the support of approximately 88% of our shareholders. While our Compensation Committee viewed this outcome positively, it also believed it was critical that it continue to engage with our shareholders regarding our compensation program. This engagement ultimately resulted in several changes to the program for 2018 (see page 38).

CRO Input & Risk Management

- Effective risk management underpins everything that we do, and our compensation programs are carefully designed to be consistent with the safety and soundness of our firm.
- Our CRO presented his annual risk assessment jointly to our Compensation Committee and our Risk Committee in order to assist with the evaluation of our program's design.
  - » This assessment is focused on whether our program is consistent with regulatory guidance providing that financial services firms should ensure that variable compensation does not encourage imprudent risk-taking.
  - » Our CRO's view was that the various components of our compensation programs and policies work together to balance risk and reward in a manner that does not encourage imprudent risk-taking.

Market for Talent

- Our Compensation Committee reviews the competitive market for talent as part of its review of our compensation program's effectiveness in attracting and retaining talent, and to help determine our NEOs' compensation.
  - » Our goal is always to be in a position to appoint people from within the firm to our most senior leadership positions and our executive compensation program is intended to incentivize our people to stay at Goldman Sachs and to aspire to these senior roles.
- The Committee conducts an evaluation of our existing NEO compensation program, comparing it to those of our U.S. Peers and European Peers.
- The Committee performs this evaluation with information and assistance from our Global Head of Human Capital Management (HCM). The evaluation is based on compensation information (including plan design and compensation levels for named executive officers at peer firms) and financial performance of our peers obtained from an analysis of public filings by our Finance and HCM Divisions, as well as surveys regarding incentive compensation practices conducted by Willis Towers Watson.

Regulatory Considerations

- Our Compensation Committee also considers regulatory matters and the views of our regulators when determining NEO compensation. Throughout 2018, our senior management briefed the Committee on relevant regulatory developments.

Independent Compensation Consultant Input

- Our Compensation Committee recognizes the importance of using an independent compensation consulting firm that is appropriately qualified and that provides services solely to the Committee and not to our firm. Accordingly, the Committee again retained Semler Brossy as its independent compensation consultant in 2018.
- The Committee uses Semler Brossy because of the quality of its advice as well as its:
  - » Extensive experience working with a broad cross-section of companies;
  - » Multi-faceted business perspective; and
  - » Expertise in the areas of executive compensation, management incentives and performance measurement.
- In 2018, the Committee asked Semler Brossy to assess our compensation program for our PMDs, including our NEOs.

VIEWS OF INDEPENDENT COMPENSATION CONSULTANT

"The PMD pay program has continued to:

- ***Be aligned with, and sensitive to, firm performance;***
- ***Contain features that reinforce significant alignment with shareholders and a long-term focus; and***
- ***Utilize policies and procedures, including subjective determinations, that facilitate the firm's approach to risk-taking and risk management by supporting the mitigation of known and perceived risks."***

- Semler Brossy did not recommend, and was not involved in determining, the amount of any NEO's compensation.
- In addition to providing its assessment of our compensation program for PMDs, Semler Brossy also participated in the discussion of our CRO's compensation-related risk assessment and reviewed the peer compensation and financial information provided to the Committee by our Finance and HCM Divisions and Willis Towers Watson (as described above).

IN FEBRUARY 2018, OUR COMPENSATION COMMITTEE DETERMINED THAT SEMLER BROSSY HAD NO CONFLICTS OF INTEREST IN PROVIDING SERVICES TO THE COMMITTEE AND WAS INDEPENDENT UNDER THE FACTORS SET FORTH IN THE NYSE RULES FOR COMPENSATION COMMITTEE ADVISORS BASED ON THESE FACTORS:

Semler Brossy provides services only to the Committee (and not to our firm).	Semler Brossy has no significant business or personal relationship with any member of the Committee or any executive officer.	The fees our firm paid to Semler Brossy are not material to Semler Brossy's total revenues.	None of Semler Brossy's principals owns any shares of our Common Stock.

OVERVIEW OF COMPENSATION ELEMENTS

Fixed Compensation

- Fixed compensation provides our NEOs with a predictable level of income that is competitive with our peers.
- We made no changes to NEO base salary levels ($2.0 million for our CEO and $1.85 million for our other NEOs, in each case on an annual basis), and our Compensation Committee believes that these salary levels are competitive in the market for talent. Salaries for Messrs. Solomon, Waldron, Scherr and O'Neill were increased at the time of their changes in role/title.
- The requirements of the European Union's Fourth Capital Requirements Directive limit the amount of variable compensation that is permitted to be granted to certain U.K. employees by reference to their fixed compensation. In this regard, Mr. Gnodde received a fixed allowance of $8.15 million for 2018, in addition to his base salary.
  - » In order to generally align the equity component of Mr. Gnodde's overall 2018 compensation with that of the other NEOs, this fixed allowance was paid approximately 37% in RSUs, with the remainder paid in cash.
  - » The fixed allowance RSUs will deliver as Shares at Risk in three approximately equal installments in each of 2020, 2021 and 2022. Substantially all of the Shares at Risk delivered to Mr. Gnodde (after applicable tax withholding) will be restricted from sale until January 2024. However, as required by regulatory guidance, these fixed allowance RSUs are not subject to the clawback and forfeiture provisions that apply to year-end RSUs (e.g., cause and/or non-compete/non-solicit provisions).

Annual Variable Compensation

- Variable compensation provides our NEOs with the opportunity to realize cash and equity-based incentives that are aligned with firmwide and individual performance.
- In 2018, we paid annual variable compensation to our NEOs in the form of cash and PSUs or RSUs. Certain material terms of each of the equity-based components are summarized below. Additional detail regarding other material terms is provided as follows:
  - » Clawback and forfeiture provisions are described more fully on pages 53-54; and
  - » Treatment upon a termination of employment or change in control is described more fully in — *Executive Compensation—Potential Payments Upon Termination or Change in Control* on pages 65-68.

Annual Variable Compensation – PSUs – Overview of Material Terms

- Provide recipient with annual variable compensation that has a metrics-based outcome; the ultimate value paid to the NEO is tied to firm performance both through stock price and metrics-based structure (ROE is used given it is a risk-based metric that is an important indicator of the firm's operating performance and is viewed by many shareholders as a key performance metric).
- PSUs will be paid at 0-150% of the initial award based on our average ROE over 2019–2021, using both absolute and relative metrics; see chart on page 39 for more detail on calculation methodology and enhancements made to metrics.
- Awards will be settled in 2022, with 50% settled in cash based on the average closing price of our Common Stock over a ten-trading-day period, and 50% settled in Shares at Risk (i.e., shares (after applicable tax withholding) that are subject to transfer restrictions through January 2024, five years after the PSU grant date).
  - » Transfer restrictions generally prohibit the sale, transfer, hedging or pledging of underlying Shares at Risk, even if the NEO leaves our firm (subject to limited exceptions; see pages 65-68 for more detail).
- Average ROE is the average of the annual ROE for each year during the performance period.
  - » Annual ROE for the firm is calculated as annualized net earnings applicable to common shareholders divided by average common shareholders' equity, as publicly reported by Goldman Sachs in its annual report.
  - » For purposes of determining ROE of our peers with respect to the PSUs' relative metrics, annual ROE is as reported in the peer company's publicly disclosed annual report, rounded to one decimal place.
  - » If a peer company's ROE is not reported in this form, its ROE will be its annualized net earnings applicable to common shareholders divided by average common shareholders' equity and will be calculated using available publicly disclosed information.
- If the Committee determines it is necessary or appropriate to maintain the intended economics of PSUs, it may make adjustments, including to the firm's or a peer company's ROE as it deems equitable in light of changed circumstances (e.g., unusual or non-recurring events), resulting from changes in accounting methods, practices or policies, changes in capital structure, a material change in the firm's or a peer company's revenue mix or business activities or such other changed circumstances as the Committee may deem appropriate; any adjustments to the firm's or a peer company's ROE for purposes of the relative ROE calculation will be based on publicly disclosed financial information.
- The Committee may adjust the applicable peer group in certain specified circumstances (e.g., a merger or a material change in a peer company's revenue mix or business activities).
- Each PSU includes a cumulative dividend equivalent right payable only if and when that PSU settles.
- PSUs have no additional service-based vesting requirement; however, they (and underlying Shares at Risk) provide for forfeiture or recapture in a number of situations. For more detail on our forfeiture and recapture provisions, see pages 53-54.

Annual Variable Compensation – RSUs – Overview of Material Terms

- Provide recipients with annual equity-based incentives; value tied to firm performance through stock price.
- Vested at grant; our general program provides that underlying shares are delivered in three approximately equal installments on first, second and third anniversaries of grant.
  - » For year-end RSUs granted to Mr. Gnodde, due to applicable U.K. regulatory requirements, underlying shares will be delivered in five approximately equal installments on the third through seventh anniversaries of grant.
- Shares delivered in respect of RSUs are Shares at Risk, meaning that, for our NEOs, transfer restrictions generally apply for five years after the equity award grant date to all or substantially all shares delivered in respect of RSUs under the award (after applicable tax withholding).
  - » Approximately 50% of shares delivered in respect of RSUs are transferable upon delivery to permit NEOs to satisfy tax withholding obligations.
  - » For Mr. Gnodde, Shares at Risk delivered on or after the fifth anniversary of grant will be subject to transfer restrictions for one year following delivery due to applicable U.K. regulatory requirements; additionally, Shares at Risk delivered in respect of Additional RSUs will only be subject to transfer restrictions for one year following delivery.
- Transfer restrictions generally prohibit the sale, transfer, hedging or pledging of Shares at Risk, even if the recipient leaves our firm (subject to limited exceptions; see pages 65-68 for more detail).
- Each RSU includes a dividend equivalent payment right (other than those granted to Mr. Gnodde as part of his annual variable compensation, which cannot include this right due to applicable U.K. regulatory requirements; see page 36 for more detail).

Determinations Regarding LTIP Awards and Certain Outstanding PSUs

- Our outstanding LTIP awards, first granted in 2011, have eight-year performance periods.
- The Compensation Committee discontinued granting the awards in 2016.
- As described in our Proxy Statement for our 2011 Annual Meeting of Shareholders, Mr. Blankfein was granted an LTIP award in January 2011 (2011 LTIP Award). The 2011 LTIP Award had a performance period from January 2011 through December 2018. The ongoing governmental, regulatory and civil proceedings relating to 1MDB relate to events that occurred during this performance period, and the Compensation Committee concluded that it was appropriate to defer its decision under the awards until more information is available. As a result, no amounts under the 2011 LTIP Award have yet been determined or paid. The Board will publicly disclose when a final determination is made.
- Although no amounts are earned by or paid to the recipient under the LTIP awards until the end of the applicable performance period (and, in the case of the 2011 LTIP Award, until individual performance is assessed for that period), the notional values of these awards are adjusted upward or downward for each year of the performance period by an amount equal to our annual "ROE", subject (in the case of all LTIP awards other than the 2011 LTIP Award) to an annual 12% cap (for example, the average increase in value in 2018 for the outstanding LTIP awards granted to Mr. Blankfein was approximately 12.3%).
  - » For this purpose, as well as under the PSUs granted for services in 2015 (2015 Year-End PSUs), "ROE" is calculated for each year by dividing net earnings applicable to common shareholders by average monthly common shareholders' equity, adjusted for the after-tax effects of amounts that would be excluded from "Pre-Tax Earnings" under The Goldman Sachs Amended and Restated Restricted Partner Compensation Plan (RPCP).
  - » The types of amounts that could be excluded from "Pre-Tax Earnings" include, but are not limited to, amounts related to: exit or disposal activities, impairment or disposal of long-lived assets or impairment of goodwill and other intangible assets, net provisions for litigation and other regulatory proceedings and items that are unusual in nature or infrequent in occurrence and that are separately disclosed, in each case if the aggregate net effect of such amounts on Pre-Tax Earnings exceeds a pre-established threshold (for relevant RPCP provisions, see page 3 of Exhibit 10.1 of our Quarterly Report on Form 10-Q for the period ended February 24, 2006, filed April 5, 2006).

Adjustments to Certain Outstanding PSUs and LTIP Awards

- The outstanding PSUs and LTIP awards contemplate that the Committee shall, in order to maintain the intended economics of the awards, make certain adjustments to the calculation of "ROE" and, in the case of the LTIP awards, changes in BVPS for events such as legal, regulatory and/or accounting changes, or other actions that impact capital.
- As contemplated in our Proxy Statement for our 2018 Annual Meeting of Shareholders, the Committee considered the impact of U.S. Tax Legislation on the economics of the outstanding PSUs and LTIP awards for the remainder of these awards' performance periods, consistent with their terms, and accordingly made the changes described below.

2015 Year-End PSUs and Outstanding LTIP Awards

- The Committee determined it was appropriate to adjust the calculation of 2018 "ROE" and 2018 BVPS in order to lower the performance calculations under the award due to a true-up in the firm's original estimate for the impact of the changes that resulted from U.S. Tax Legislation. This change resulted in a decrease to ROE of approximately 65 basis points and a decrease to the change in BVPS of approximately 70 basis points (with the latter change applicable only to the LTIP awards).

2017 Year-End PSUs

- The Committee determined it was appropriate to increase the absolute ROE threshold for maximum payout for the 2017 Year-End PSUs to 15% (from 14%) in light of the impact of U.S. Tax Legislation on the firm and the industry more broadly and other factors, in order to maintain the intended economics of the award.

OTHER COMPENSATION POLICIES AND PRACTICES

Stock Ownership Guidelines and Retention Requirements

- In January 2015 our Board adopted Stock Ownership Guidelines to supplement the longstanding retention requirements applied through our Shareholders' Agreement (described below). These guidelines provide that:
  - » Our CEO must retain beneficial ownership of a number of shares of Common Stock equal in value to 10x his base salary for so long as he remains our CEO.
  - » Each of our COO and CFO must retain beneficial ownership of a number of shares of Common Stock equal in value to 6x his base salary for so long as he remains in such a position at the firm.
  - » Transition rules apply in the event that an individual becomes newly appointed to a position subject to these guidelines.
- Each member of our Executive Leadership Team met these Stock Ownership Guidelines in 2018.
- Separate from the Stock Ownership Guidelines, our Shareholders' Agreement imposes retention requirements on each member of our Executive Leadership Team with respect to shares of Common Stock received in respect of equity awards.
  - » Our CEO is required, for so long as he holds that position, to retain (including, in certain cases, ownership through estate planning entities established by him) at least 75% of the shares of Common Stock received (net of payment of any option exercise price and withholding taxes) as compensation (After-Tax Shares) since becoming CEO.
  - » Similarly, each of our COO and CFO is required (for so long as he remains in such a position at the firm) to retain at least 50% of After-Tax Shares received since being appointed to such a position.

Recapture Provisions

We have a longstanding practice of including robust recapture provisions in our incentive compensation awards. In addition, we added a new recapture provision to our NEOs' 2018 year-end equity-based awards relating to the 1MDB investigation. The chart below summarizes our conduct-related recapture rights, which in many cases include both forfeiture and repayment rights (collectively, "Recapture"):

	CAUSE	FAILURE TO CONSIDER RISK	1MDB INVESTIGATION *(NEW)*
WHO	Each employee who receives equity-based awards as part of his or her year-end compensation (since IPO)	Each employee who receives equity-based awards as part of his or her year-end compensation (since 2009 year-end)	Each of our NEOs
WHEN	If such employee engages in conduct constituting "cause," including: ■ Is convicted in a criminal proceeding on certain misdemeanor charges, on a felony charge or an equivalent charge; ■ Engages in employment disqualification conduct under applicable law; ■ Willfully fails to perform his or her duties to the firm; ■ Violates any securities or commodities laws, rules or regulations of any relevant exchange or association of which the firm is a member; ■ Violates any of our policies concerning hedging, pledging or confidential or proprietary information, or materially violates any other of our policies; ■ Impairs, impugns, denigrates, disparages or negatively reflects upon our name, reputation or business interests; or ■ Engages in conduct detrimental to us	If, during the time period specified in the award agreement, such employee participated (including, in certain cases, participation in a supervisory role) in transactions on behalf of the firm or our clients without appropriately considering risk to the firm or the broader financial system, which have or reasonably could be expected to result in a material adverse impact on the firm, the employee's business unit or the broader financial system	If the results of the investigation relating to 1MDB would have impacted the number of 2018 RSUs or PSUs granted to such NEO
WHAT	All outstanding PSUs, RSUs and Shares at Risk at the time "cause" occurs[1]	All equity-based awards (e.g., PSUs and RSUs (and underlying Shares at Risk)) covered by the specified time period[1]	2018 PSUs and RSUs (and underlying Shares at Risk) are subject to forfeiture if it is determined that the size of the award should be reduced

- Our Compensation Committee adopted a comprehensive, standalone clawback policy in January 2015 that applies to all of our NEOs and generally permits recovery of awards (including equity-based awards, underlying Shares at Risk and historical LTIP awards, as applicable).
- In addition to the Recapture provisions described above, 2018 year-end PSUs and RSUs (and, in certain cases, underlying Shares at Risk) provide for Recapture if:
  - » Our firm is determined by bank regulators to be "in default" or "in danger of default" as defined under the Dodd-Frank Wall Street Reform and Consumer Protection Act, or fails to maintain for 90 consecutive business days, the required "minimum Tier 1 capital ratio" (as defined under Federal Reserve Board regulations);
  - » The events covered by our Sarbanes-Oxley Clawback occur[2];

[1] If after delivery, payment or release of transfer restrictions, we determine that a forfeiture event had previously occurred we can require repayment to us of the award (including amounts withheld to pay withholding taxes) and any other amounts paid or delivered in respect thereof.

[2] The clawback policy expands the Sarbanes-Oxley clawback provisions to apply to variable compensation (whether cash- or equity-based) paid to any of our NEOs (even though the Sarbanes-Oxley Act provision on which it is based requires the clawback to apply only to our CEO and CFO).

- » The NEO associates with any business that constitutes a Covered Enterprise (as defined on page 67);
- » The NEO solicits our clients or prospective clients to transact business with a Covered Enterprise, or to refrain from doing business with us or interferes with any of our client relationships;
- » The NEO or an entity with which he is associated solicits or hires certain employees of the firm; or
- » The NEO fails to perform obligations under any agreement with us.

- In addition, Mr. Gnodde's year-end RSUs (and, in certain cases, underlying Shares at Risk) are subject to several recapture provisions mandated by U.K. regulations. These provisions contemplate recapture in the event of:
  - » A material downturn in financial performance suffered by the firm or certain business units before delivery of underlying shares;
  - » A material failure of risk management suffered by the firm or certain business units on or before December 31, 2025;
  - » Serious misconduct that is sufficient to justify summary termination of employment under English law occurring on or before December 31, 2025 (to the extent not otherwise covered by the "cause" clawback described above); or
  - » A failure of supervision that is deemed to occur in the event of the serious misconduct of an employee during 2018, over whom Mr. Gnodde has supervisory responsibility, where that serious misconduct relates to compliance, control or risk.

  In addition, Mr. Gnodde's year-end RSUs are subject to recapture if he associates with a material Covered Enterprise before January 1, 2024.
- Our LTIP awards (which were granted between 2011 and 2016) are also subject to robust clawback and forfeiture provisions, generally consistent with those described for "cause" and "failure to consider risk" described above.

Hedging Policy; Pledging of Common Stock

Our NEOs are prohibited from hedging any shares of our Common Stock, even shares they can freely sell, for so long as they remain executive officers. In addition, our NEOs and all other employees are prohibited from hedging their equity-based awards. Our employees, other than our executive officers, may hedge only shares of our Common Stock that they can otherwise sell. However, they may not enter into uncovered hedging transactions and may not "short" shares of our Common Stock. Employees also may not act on investment decisions with respect to our Common Stock, except during applicable "window periods." None of our executive officers has any shares of Common Stock subject to a pledge.

Qualified Retirement Benefits

During 2018, each of our NEOs (other than Mr. Gnodde) participated in The Goldman Sachs 401(k) Plan (401(k) Plan), which is our U.S. broad-based tax-qualified retirement plan. In 2018 these individuals were eligible to make pre-tax, and/or "Roth" after-tax contributions to our 401(k) Plan and receive a dollar-for-dollar matching contribution from us on the amount they contributed, up to a maximum of $11,000. For 2018, these individuals each received a matching contribution of $11,000.

During 2018, Mr. Gnodde participated in a U.K. defined contribution arrangement known as LifeSight (the U.K. Defined Contribution Arrangement). Under the terms of the U.K. Defined Contribution Arrangement, eligible employees receive a firm contribution up to a capped percentage of salary (which, for 2018, equaled £13,365) and are also able to make their own contributions to the plan. For 2018, Mr. Gnodde received a firm contribution of £13,365.

Perquisites and Other Benefits

Our NEOs received in 2018 certain benefits that are considered "perquisites" for purposes of the SEC rules regarding compensation disclosure. While our Compensation Committee was provided with the estimated value of these items, it determined, as in prior years, not to give these amounts significant consideration in determining our NEOs' 2018 variable compensation.

During 2018, we made available to our NEOs (other than Messrs. Gnodde and O'Neill) a car and driver and, in some cases, other services for security and/or business purposes. Car and driver services were contracted through a third party for Messrs. Waldron and Scherr. We also offered our NEOs benefits and tax counseling services, generally provided or arranged by our subsidiary, The Ayco Company, L.P. (Ayco), to assist them with tax and regulatory compliance and to provide them with more time to focus on the needs of our business.

Our NEOs participate in our executive medical and dental program and receive executive life insurance while they remain PMDs. Our NEOs also receive long-term disability insurance coverage. Our NEOs (and their covered dependents) are also eligible for a retiree healthcare program and receive certain other perquisites, some of which have no incremental cost to us. See "All Other Compensation" and footnote (b) in *—Executive Compensation—2018 Summary Compensation Table*.

Section 162(m)

Section 162(m) of the Internal Revenue Code generally limits our annual corporate tax deduction for compensation paid to each of our "covered employees" to $1 million. Under Section 162(m) as in effect prior to 2018, our "covered employees" for a year were our CEO and our next three most highly compensated executive officers (other than our CFO) on the last day of that year, and compensation that qualified as "performance-based compensation" under Section 162(m) did not count against the $1 million deduction limit. Moreover, because "covered employee" status prior to 2018 was determined on a discrete annual basis, compensation paid to a person after the person ceased to be a "covered employee" (e.g., because the person left the firm or changed roles before the end of the year) was not subject to the $1 million deduction limit. Amounts awarded pursuant to our RPCP, our shareholder-approved plan under which we historically awarded variable compensation to Management Committee members (including our NEOs), were intended to constitute qualified "performance-based compensation" under Section 162(m).

U.S. Tax Legislation modified Section 162(m) to, among other things, eliminate the exclusion for qualified "performance-based compensation" and broaden the group of people who are considered "covered employees." Beginning in 2018, "covered employees" include anyone who served as CEO or CFO during any part of a year and the next three most highly compensated NEOs for that year. In addition, once a person is considered a "covered employee," that person remains a covered employee in all subsequent years (including after the person leaves the firm or changes roles). As a result of the changes to Section 162(m), beginning in 2018 generally we will not be entitled to a U.S. tax deduction for compensation paid in any year to our NEOs and our other "covered employees" in excess of $1 million. We may be able to deduct in 2018 or thereafter certain compensation paid to our "covered employees" to the extent it is eligible for transition relief under U.S. Tax Legislation and any rules promulgated thereunder. However, there is no guarantee that such compensation will be deductible, and the firm may determine that certain compensation cannot qualify for such transition relief or that it does not wish to take or refrain from taking steps necessary to qualify for such relief.

Because U.S. Tax Legislation eliminated the benefit of determining variable compensation under the RPCP, for 2018 Management Committee members (including our NEOs) did not participate in the RPCP, but instead participated in The Goldman Sachs Partner Compensation Plan (PCP), the plan under which we determine variable compensation for all of our other PMDs.

SENIOR CHAIRMAN AGREEMENT WITH MR. BLANKFEIN

On December 19, 2018, our Board approved a letter agreement between the firm and Mr. Blankfein in connection with Mr. Blankfein's previously announced retirement and transition to Senior Chairman. This agreement provided that Mr. Blankfein would become Senior Chairman of the firm as of January 1, 2019. In this capacity, he serves as a resource for both our Board and management, which may include providing advice, client outreach, performing speaking engagements on behalf of the firm, office visits and other mutually agreed activities as appropriate.

Under the agreement, while Mr. Blankfein serves as Senior Chairman, he continues to receive benefits generally provided to PMDs. Mr. Blankfein is not an employee and does not receive any salary or incentive compensation. Additionally, our Board has determined that it is appropriate for security reasons for the firm to provide Mr. Blankfein with a car and security driver through December 31, 2019 for business use.

GS GIVES

As a key element of the firm's overall impact investing platform, we established our GS Gives program to coordinate, facilitate and encourage global philanthropy by our PMDs. The firm contributed approximately $130 million for the 2018 GS Gives program, with PMD compensation being reduced to fund this contribution.

GS Gives underscores our commitment to philanthropy through diversified and impactful giving, harnessing the collaborative spirit of the firm's partnership, while also inspiring our firm's next generation of philanthropists. We ask our PMDs to make recommendations of not-for-profit organizations to receive grants from the firm's contributions to GS Gives.

Grant recommendations from our PMDs help to ensure that GS Gives invests in a diverse group of charities that improve the lives of people in communities where we work and live. We encourage our PMDs to make recommendations of grants to organizations consistent with GS Gives' mission of fostering innovative ideas, solving economic and social issues, and enabling progress in underserved communities globally. GS Gives undertakes diligence procedures for donations and has no obligation to follow recommendations made to us by our PMDs.

In 2018, GS Gives accepted the recommendations of over 550 current and retired PMDs and granted over $154 million to over 2,300 not-for-profit organizations around the world. GS Gives made grants in support of a broad range of large-scale initiatives, including ongoing need-based financial aid at colleges and universities globally; the third-annual Analyst Impact Fund competition, a Partnership Committee-led initiative in which teams of analysts in all regions enter to win a GS Gives grant recommendation for charities of their choosing, with 2018's winning teams addressing global homelessness, human trafficking, disease eradication in rural communities and access to clean water; cutting-edge cancer care in London; and innovative educational efforts across Japan. The U.S. Dollar equivalent amounts donated in 2018 by GS Gives based on the following individuals' recommendations were: Mr. Solomon—$2.0 million; Mr. Waldron—$1.7 million; Mr. Scherr—$1.6 million; Mr. Chavez—$1.8 million; Mr. Gnodde—$2.0 million; Mr. O'Neill—$2.1 million; and Mr. Blankfein—$3.7 million.

Executive Compensation

The 2018 Summary Compensation Table below sets forth compensation information relating to 2018, 2017 and 2016. In accordance with SEC rules, compensation information for each NEO is only reported beginning with the year that such executive became an NEO. For a discussion of 2018 NEO compensation, please read —*Compensation Discussion and Analysis* above.

Pursuant to SEC rules, the 2018 Summary Compensation Table is required to include for a particular year only those equity-based awards granted during that year, rather than awards granted after year-end, even if awarded for services in that year. SEC rules require disclosure of cash compensation to be included in the year earned, even if payment is made after year-end.

Generally, we grant equity-based awards and pay any cash variable compensation (as well as fixed allowances) for a particular year shortly after that year's end. As a result, annual equity-based awards, cash variable compensation and Mr. Gnodde's fixed allowance are disclosed in each row of the table as follows:

2018

- "Bonus" is cash variable compensation **for 2018**
- "Stock Awards" are PSUs, restricted stock and RSUs awarded **for 2017** (including Mr. Gnodde's equity-based fixed allowance for 2017)

2017

- "Bonus" is cash variable compensation **for 2017**
- "Stock Awards" are PSUs and RSUs awarded **for 2016** (including Mr. Gnodde's equity-based fixed allowance for 2016)

2016

- "Bonus" is cash variable compensation **for 2016**
- "Stock Awards" are PSUs and RSUs awarded **for 2015**

2018 SUMMARY COMPENSATION TABLE

NAME AND PRINCIPAL POSITION	YEAR	SALARY ($)	BONUS ($)	STOCK AWARDS[a] ($)	CHANGE IN PENSION VALUE [b] ($)	ALL OTHER COMPENSATION[c] ($)	TOTAL ($)
David M. Solomon Chairman and CEO	2018	1,887,500	5,700,375	12,775,034	—	299,926	20,662,835
	2017	1,850,000	5,745,000	8,547,708	196	233,207	16,376,111
John E. Waldron President and COO	2018	1,587,500	6,812,625	8,236,810	—	177,922	16,814,857
Stephen M. Scherr Executive Vice President and CFO	2018	1,556,827	6,083,974	7,488,028	—	170,784	15,299,613
R. Martin Chavez Executive Vice President and CFO (through November 4, 2018); Vice Chairman (until year-end 2018)	2018	1,850,000	4,545,000	11,518,639	—	152,828	18,066,467
	2017	1,733,333	5,180,000	8,679,168	—	141,329	15,733,830
Richard J. Gnodde Vice Chairman (until year-end 2018)	2018	6,995,000[d]	—	10,973,443	—	93,191	18,061,634
	2017	6,995,000[d]	—	9,258,175	35,477	105,766	16,394,418
Timothy J. O'Neill Vice Chairman (until year-end 2018)	2018	1,587,500	6,442,625	8,736,067	—	177,564	16,943,756
Lloyd C. Blankfein Former Chairman and CEO	2018	2,000,000	4,255,000	16,772,822	—	362,836	23,390,658
	2017	2,000,000	4,400,000	15,240,145	4,909	350,212	21,995,266
	2016	2,000,000	4,000,000	13,867,044	2,524	337,330	20,206,898

Note: Mr. Solomon succeeded Mr. Blankfein as CEO in October 2018 and became Chairman of our Board in January 2019. Mr. Waldron succeeded Mr. Solomon as our President and COO in October 2018. Mr. Scherr succeeded Mr. Chavez as CFO in November 2018. Messrs. Chavez, Gnodde and O'Neill served as Vice Chairmen during all or part of 2018. Effective January 1, 2019, Messrs. Chavez, Gnodde and O'Neill no longer hold the title or role of Vice Chairman, which title and role have been discontinued, and are no longer executive officers of the firm. Salaries for Messrs. Solomon, Waldron, Scherr and O'Neill were increased at the time of their respective changes in role/title.

(a) Amounts included for 2018 represent the grant date fair value, in accordance with the Financial Accounting Standards Board's Accounting Standards Codification 718 "Compensation—Stock Compensation" (ASC 718), of PSUs, restricted stock and RSUs granted in January 2018 for services in 2017 (2017 Year-End PSUs, 2017 Year-End Restricted Stock and 2017 Year-End RSUs, respectively). For Mr. Gnodde, 2017 Year-End RSUs also include the Additional RSUs paid for 2017 and the equity-based component of his 2017 fixed allowance (2017 Fixed Allowance RSUs). Grant date fair value for 2017 Year-End PSUs, 2017 Year-End Restricted Stock and 2017 Year-End RSUs is determined by multiplying the aggregate number of units or shares, as applicable, by $250.97, the closing price per share of Common Stock on the NYSE on January 18, 2018, the grant date. For the portion of the 2017 Year-End PSUs granted to Messrs. Solomon, Chavez and Blankfein that are stock-settled, the value includes an approximately 9% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these PSUs. For 2017 Year-End Restricted Stock granted to Messrs. Waldron, Scherr and O'Neill, the value includes an approximately 17% liquidity discount to reflect the transfer restrictions on these shares. For 2017 Fixed Allowance RSUs granted to Mr. Gnodde, the value includes an approximately 13% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these RSUs. For 2017 Year-End RSUs granted to Mr. Gnodde other than the 2017 Fixed Allowance RSUs, the value includes an approximately 12% discount to reflect both the transfer restrictions on the Common Stock underlying these RSUs and the lack of dividend equivalent payment rights in respect of such RSUs (see page 36 for more details). Amounts included for 2017 represent the grant date fair value, in accordance with ASC 718, of PSUs and RSUs granted in January 2017 for services in 2016 (2016 Year-End PSUs and 2016 Year-End RSUs, respectively). For Mr. Gnodde, 2016 Year-End RSUs also include the equity-based component of his 2016 fixed allowance (2016 Fixed Allowance RSUs). Grant date fair value for 2016 Year-End PSUs and 2016 Year-End RSUs is determined by multiplying the aggregate number of units by $231.41, the closing price per share of Common Stock on the NYSE on January 19, 2017, the grant date. For the portion of the 2016 Year-End PSUs granted to Mr. Blankfein that are stock-settled, the value includes an approximately 10% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these PSUs. For 2016 Year-End RSUs granted to Messrs. Solomon and Chavez, as well as the 2016 Fixed Allowance RSUs granted to Mr. Gnodde, the value includes an approximately 12% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these RSUs. For 2016 Year-End RSUs granted to Mr. Gnodde other than the 2016 Fixed Allowance RSUs, the value includes an approximately 6% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these RSUs. The amount included for Mr. Blankfein for 2016 represents the grant date fair value, in accordance with ASC 718, of PSUs and RSUs granted in January 2016 for services in 2015 (2015 Year-End PSUs and 2015 Year-End RSUs, respectively). Grant date fair value for 2015 Year-End PSUs and 2015 Year-End RSUs is determined by multiplying the aggregate number of units by $151.65, the closing price per share of Common Stock on the NYSE on January 21, 2016, the grant date. The value for 2015 Year-End RSUs includes an approximately 11% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these 2015 Year-End RSUs.

(b) For 2018, the change in pension value was negative for each NEO (other than Mr. Chavez, who is not a participant in any applicable plan) as follows: Mr. Solomon—$(150); Mr. Waldron— $(1,033); Mr. Scherr—$(7,858); Mr. Gnodde—$(99,282); Mr. O'Neill—$(1,211); and Mr. Blankfein—$(2,574).

(c) See the chart and accompanying narrative on the following page, which describe the benefits and perquisites for 2018 contained in the "All Other Compensation" column above.

(d) Represents Mr. Gnodde's salary—$1,850,000—and the cash component of his fixed allowance—$5,145,000.

NAME	DEFINED CONTRIBUTION PLAN EMPLOYER CONTRIBUTION ($)	TERM LIFE INSURANCE PREMIUM ($)	EXECUTIVE MEDICAL AND DENTAL PLAN PREMIUM ($)	LONG-TERM DISABILITY INSURANCE PREMIUM ($)	EXECUTIVE LIFE PREMIUM ($)	BENEFITS AND TAX COUNSELING SERVICES* ($)	CAR** ($)
David M. Solomon	11,000	118	83,964	665	17,825	118,667	53,479
John E. Waldron	11,000	118	83,964	665	76	69,510	11,515
Stephen M. Scherr	11,000	118	83,964	665	12,824	50,773	10,193
R. Martin Chavez	11,000	118	83,964	665	12,947	2,041	41,020
Richard J. Gnodde* **	17,820	456	33,588	1,381	19,572	19,494	0
Timothy J. O'Neill	11,000	118	83,964	665	35,199	44,056	0
Lloyd C. Blankfein	11,000	118	83,964	665	31,824	57,225	61,978

* Amounts reflect the incremental cost to us of benefits and tax counseling services provided by Ayco or by another third-party provider. For services provided by Ayco, cost is determined based on the number of hours of service provided by, and compensation paid to, individual service providers. For services provided by others, amounts are payments made by us to those providers.

** Amounts reflect the incremental cost to us attributable to commuting and other non-business use. We made available to each of our NEOs (other than Messrs. Gnodde and O'Neill) in 2018 a car and driver for security and business purposes. Car and driver services were contracted through a third party for Messrs. Waldron and Scherr. The cost of providing a car is determined on an annual basis and includes, as applicable, driver compensation, annual car lease, car service fees and insurance cost, as well as miscellaneous expenses (for example, fuel and car maintenance).

*** Certain of the amounts for Mr. Gnodde have been converted from British Pounds Sterling into U.S. Dollars at a rate of 1.3333 Dollars per Pound, which was the average daily rate in 2018.

Also included in the "All Other Compensation" column are amounts reflecting the incremental cost to us of providing our identity theft safeguards program for U.S. PMDs, assistance with certain travel arrangements, in-office meals and security services. We provide security (the incremental cost of which was $114,491 for Mr. Blankfein) for the benefit of our firm and our shareholders. We do not consider these security measures to be personal benefits but rather business-related necessities due to the high-profile standing of our NEOs.

We provide our NEOs, on the same terms as are provided to other PMDs and at no incremental out-of-pocket cost to our firm, waived or reduced fees and overrides in connection with investments in certain funds and other accounts managed or sponsored by Goldman Sachs, unused tickets to certain events and certain negotiated discounts with third-party vendors.

We make available to our NEOs private aircraft from third-party vendors. Our policy is to limit personal use of such aircraft by our NEOs and to require reimbursement by the NEO for all costs associated with such use. For example, in situations where an NEO brings a personal guest as a passenger on a business-related flight, the NEO pays us an amount equal to the greater of: (a) the aggregate incremental cost to us of the usage by the guest and (b) the price of a first-class commercial airline ticket for the same trip.

2018 GRANTS OF PLAN-BASED AWARDS

The awards included in this table are 2017 Year-End PSUs, 2017 Year-End Restricted Stock and 2017 Year-End RSUs, each granted in January 2018. The PSU grants to Messrs. Solomon, Chavez and Blankfein reported in the table below were previously described in the *Compensation Discussion and Analysis* section of our Proxy Statement for our 2018 Annual Meeting of Shareholders (dated March 23, 2018).

The following table sets forth plan-based awards granted in early 2018. In accordance with SEC rules, the table does not include awards that were granted in 2019. See *—Compensation Discussion and Analysis* above for a discussion of those awards.

NAME	GRANT DATE	ESTIMATED FUTURE PAYOUTS UNDER EQUITY INCENTIVE PLAN AWARDS[a]			ALL OTHER STOCK AWARDS: NUMBER OF SHARES OF STOCK OR UNITS (#)[b]	GRANT DATE FAIR VALUE OF STOCK AWARDS ($)[c]
		THRESHOLD (#)	TARGET (#)	MAXIMUM (#)		
David M. Solomon	1/18/2018	0	53,413	80,120	—	12,775,034
John E. Waldron	1/18/2018	—	—	—	39,447	8,236,810
Stephen M. Scherr	1/18/2018	—	—	—	35,861	7,488,028
R. Martin Chavez	1/18/2018	0	48,160	72,240	—	11,518,639
Richard J. Gnodde	1/18/2018	—	—	—	49,959	10,973,443
Timothy J. O'Neill	1/18/2018	—	—	—	41,838	8,736,067
Lloyd C. Blankfein	1/18/2018	0	70,128	105,192	—	16,772,822

(a) Consists of 2017 Year-End PSUs. See *—2018 Outstanding Equity Awards at Fiscal Year-End* and *—Potential Payments Upon Termination or Change in Control* below for additional information on the 2017 Year-End PSUs.

(b) Consists of 2017 Year-End Restricted Stock and 2017 Year-End RSUs (including Mr. Gnodde's 2017 Fixed Allowance RSUs). See *—2018 Non- Qualified Deferred Compensation* and *—Potential Payments Upon Termination or Change in Control* below for additional information on the 2017 Year-End Restricted Stock and the 2017 Year-End RSUs.

(c) Amounts included represent the grant date fair value in accordance with ASC 718. Grant date fair value was determined by multiplying the target number of PSUs, number of shares of restricted stock or aggregate number of RSUs, as applicable, by $250.97, the closing price per share of Common Stock on the NYSE on the grant date. For the portion of the 2017 Year-End PSUs granted to Messrs. Solomon, Chavez and Blankfein that are stock-settled, the value includes an approximately 9% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these PSUs. For 2017 Year-End Restricted Stock granted to Messrs. Waldron, Scherr and O'Neill, the value includes an approximately 17% liquidity discount to reflect the transfer restrictions on these shares. For 2017 Fixed Allowance RSUs granted to Mr. Gnodde, the value includes an approximately 13% liquidity discount to reflect the transfer restrictions on the Common Stock underlying these RSUs. For 2017 Year-End RSUs granted to Mr. Gnodde other than the 2017 Fixed Allowance RSUs, the value includes an approximately 12% discount to reflect both the transfer restrictions on the Common Stock underlying these RSUs and the lack of dividend equivalent payment rights in respect of such RSUs (see page 36 for more details).

2018 OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table sets forth the 2017 Year-End PSUs granted in January 2018 to Messrs. Solomon, Chavez and Blankfein and the 2016 Year-End PSUs granted in January 2017 to Mr. Blankfein. As of December 31, 2018, Messrs. Waldron, Scherr, Gnodde and O'Neill did not hold any awards reportable in this table, and no NEOs hold any option awards.

NAME	STOCK AWARDS	
	EQUITY INCENTIVE PLAN AWARDS: NUMBER OF UNEARNED SHARES, UNITS OR OTHER RIGHTS THAT HAVE NOT VESTED (#)[(a)]	EQUITY INCENTIVE PLAN AWARDS: MARKET OR PAYOUT VALUE OF UNEARNED SHARES, UNITS OR OTHER RIGHTS THAT HAVE NOT VESTED ($)[(b)]
David M. Solomon	53,413	8,922,642
R. Martin Chavez	48,160	8,045,128
Lloyd C. Blankfein	173,841	29,040,139

(a) The awards reflected in this column are the 2017 Year-End PSUs granted in January 2018 to Messrs. Solomon, Chavez and Blankfein and the 2016 Year-End PSUs granted in January 2017 to Mr. Blankfein. Pursuant to SEC rules, the 2016 Year-End PSUs are represented at the maximum amount of shares that may be earned, and the 2017 Year-End PSUs are represented at the target amount of shares that may be earned. The ultimate amount of shares earned under the 2016 and 2017 Year-End PSUs (if any) will be determined based on the firm's average ROE, both on an absolute basis and relative to a peer group, over 2017–2019 and 2018–2020, respectively. In both cases, the amount shown does not represent the actual achievement to date under the award, and full information regarding peer group performance to date was not available as of the time of filing of this Proxy Statement.

(b) Pursuant to SEC rules, the dollar value in this column represents the amount of shares shown in the immediately prior column multiplied by $167.05, the closing price per share of Common Stock on the NYSE on December 31, 2018 (the last trading day of the year).

2018 OPTION EXERCISES AND STOCK VESTED

The following table sets forth information regarding option exercises by Mr. Solomon in 2018, as well as the value of the 2017 Year-End Restricted Stock granted to Messrs. Waldron, Scherr and O'Neill in January 2018 and the value of the 2017 Year-End RSUs granted to Mr. Gnodde in January 2018. Additionally, the table reports the value of the 2015 Year-End PSUs awarded to Mr. Blankfein that were settled in early 2019 following the end of the applicable performance period. No information is reportable with respect to Mr. Chavez for 2018 in this table.

NAME	OPTION AWARDS		STOCK AWARDS	
	NUMBER OF SHARES ACQUIRED ON EXERCISE (#)	VALUE REALIZED ON EXERCISE ($)[(a)]	NUMBER OF SHARES ACQUIRED ON VESTING (#)[(b)]	VALUE REALIZED ON VESTING ($)[(c)]
David M. Solomon	128,000	22,407,973	—	—
John E. Waldron	—	—	39,447	9,900,014
Stephen M. Scherr	—	—	35,861	9,000,035
Richard J. Gnodde	—	—	49,959	12,538,210
Timothy J. O'Neill	—	—	41,838	10,500,083
Lloyd C. Blankfein	—	—	48,689	9,715,890

(a) Values were determined by multiplying the number of shares of our Common Stock underlying the options by the difference between the closing price per share of our Common Stock on the NYSE on the date of exercise and the exercise price of the options.

(b) For Messrs. Waldron, Scherr and O'Neill, consists of 2017 Year-End Restricted Stock which was vested upon grant. For Mr. Gnodde, consists of shares of Common Stock underlying 2017 Year-End RSUs, all of which were vested upon grant. With respect to the 2017 Year-End RSUs granted to Mr. Gnodde, one-fifth of these shares is deliverable on or about each of the third through seventh anniversaries of grant. Substantially all of the shares of 2017 Year-End Restricted Stock and shares of Common Stock underlying the 2017 Year-End RSUs that are delivered to our NEOs are subject to transfer restrictions until January 2023; for Mr. Gnodde, shares delivered on or after the fifth anniversary of grant will be subject to transfer restrictions for one year following delivery due to applicable U.K. regulatory requirements, other than the shares underlying his Additional RSUs which will only be subject to transfer restrictions for one year following delivery. For Mr. Blankfein, this column includes the shares of Common Stock underlying his 2015 Year-End PSUs that were settled in cash on February 5, 2019 following the end of the applicable performance period on December 31, 2018. The final amounts payable under these PSUs were calculated based on the firm's average annual "ROE" over the applicable performance period (see *—Compensation Discussion and Analysis—Overview of Compensation Elements—Annual Variable Compensation* in our Proxy Statement for our 2016 Annual Meeting of Shareholders for more detail on this calculation). The initial number of PSUs granted to Mr. Blankfein was 48,467 and the average "ROE" over the performance period was 11.0%, resulting in a 100.5% multiplier. The final amount of PSUs Mr. Blankfein earned was 48,689.

(c) With respect to 2017 Year-End Restricted Stock and 2017 Year-End RSUs, values were determined by multiplying the aggregate number of shares or RSUs by $250.97, the closing price per share of our Common Stock on the NYSE on January 18, 2018, the grant date. In accordance with SEC rules the —2018 Summary Compensation Table and —2018 Grants of Plan-Based Awards sections above include the grant date fair value of the 2017 Year-End Restricted Stock and 2017 Year-End RSUs calculated in accordance with ASC 718. With respect to Mr. Blankfein's 2015 Year-End PSUs, values were determined by multiplying the aggregate number of PSUs earned by $199.55, the ten-day average closing price per share of our Common Stock on the NYSE on January 17–31, 2019. Mr. Blankfein also received $421,160 in respect of the accrued dividend equivalents underlying these earned PSUs.

2018 PENSION BENEFITS

The following table sets forth pension benefit information as of December 31, 2018. The Goldman Sachs Employees' Pension Plan (GS Pension Plan) was frozen November 27, 2004, and none of our NEOs has accrued additional benefits thereunder since November 30, 2001 (at the latest). Mr. Gnodde is also a participant in The Goldman Sachs UK Retirement Plan (GS U.K. Retirement Plan), which was frozen March 31, 2016. Mr. Gnodde has not accrued benefits under the plan since that time. Mr. Chavez is not a participant in any plan reportable in this table.

NAME	PLAN NAME	NUMBER OF YEARS CREDITED SERVICES (#)[a]	PRESENT VALUE OF ACCUMULATED BENEFIT ($)[b]	PAYMENTS DURING LAST FISCAL YEAR ($)
David M. Solomon	GS Pension Plan	1	1,186	—
John E. Waldron	GS Pension Plan	1	5,257	—
Stephen M. Scherr	GS Pension Plan	8	52,809	—
Richard J. Gnodde	GS Pension Plan	1	7,920	—
	GS U.K. Retirement Plan	26	1,326,100	—
Timothy J. O'Neill	GS Pension Plan	7	99,590	—
Lloyd C. Blankfein	GS Pension Plan	3	44,009	—

(a) Our employees, including Messrs. Solomon, Waldron, Scherr, Gnodde, O'Neill and Blankfein, were credited for service for each year employed by us while eligible to participate in our GS Pension Plan or GS U.K. Retirement Plan (as applicable).

(b) Represents the present value of the entire accumulated benefit and not the annual payment an NEO would receive once his benefits commence. Prior to being frozen, our GS Pension Plan provided an annual benefit equal to between 1% and 2% of the first $75,000 of the participant's compensation for each year of credited service under our GS Pension Plan. The normal form of payment is a single life annuity for single participants and an actuarially equivalent 50% joint and survivor annuity for married participants. The present values shown in this column were determined using the following assumptions: payment of a single life annuity following retirement at either the normal retirement age (age 65) or immediately (if an NEO is over 65); a 4.56% discount rate; and mortality estimates based on the RP-2014 white collar fully generational mortality table, with adjustments to reflect continued improvements in mortality based on Scale MP-2018. Our GS Pension Plan provides for early retirement benefits, and all of our participating NEOs are eligible to elect early retirement benefits upon reaching age 55.

Prior to being frozen, our GS U.K. Retirement Plan provided for an annual benefit equal to 1.25% of the first £81,000 of the participant's compensation for each year of credited service. The normal form of payment is a single life annuity plus a contingent spouse's annuity equal to two-thirds of the member's pension. The present value shown in this column reflects Mr. Gnodde's accrued benefits with an annual cost of living adjustment that is applied pursuant to the terms of the GS U.K. Retirement Plan and was determined using the following assumptions: payment of a joint life annuity following retirement at normal retirement age 65; a 2.85% discount rate; and mortality estimates based on the S1 Light series fully generational mortality table, with adjustments to reflect continued improvements in mortality. The GS U.K. Retirement Plan provides for early retirement benefits, and Mr. Gnodde is eligible to elect early retirement benefits.

For a description of our 401(k) Plan and our U.K. Defined Contribution Arrangement, our tax-qualified defined contribution plans in the U.S. and U.K., respectively, see page 54.

2018 NON-QUALIFIED DEFERRED COMPENSATION

The following table sets forth information (i) for each NEO, with respect to vested RSUs granted for services in prior years and for which the underlying shares of Common Stock had not yet been delivered as of the beginning of 2018 (Vested and Undelivered RSUs) and (ii) for Mr. Blankfein, with respect to our NQDC Plan, which was closed to new participants and deferrals in December 2008.

Vested and Undelivered RSUs. The Vested and Undelivered RSUs generally were awarded for services in 2017, 2016, 2015 and 2014. RSUs generally are not transferable.

- Amounts shown as "Registrant Contributions" represent the 2017 Year-End RSUs, which were vested at grant.
- Amounts shown as "Aggregate Earnings" reflect the change in market value of the shares of Common Stock underlying Vested and Undelivered RSUs, as well as dividend equivalents earned and paid on those shares, during 2018.
- Amounts shown as "Aggregate Withdrawals/Distributions" reflect the value of shares of Common Stock underlying RSUs that were delivered, as well as dividend equivalents paid, during 2018.

NQDC Plan. Prior to December 2008 (when our NQDC Plan was frozen), each participant in our NQDC Plan was permitted to elect to defer up to $1 million of his or her year-end cash variable compensation for up to the later of (i) ten years or (ii) six months after termination of employment. Mr. Blankfein is the only NEO who participated in our NQDC Plan. Amounts deferred under our NQDC Plan are generally not forfeitable and were adjusted based on the performance of certain available "notional investments" selected by each participant. Distributions from our NQDC Plan to Mr. Blankfein will be made in a lump-sum cash payment. Mr. Blankfein is not subject to U.S. federal income tax on amounts that he deferred or on any "notional investment" earnings until those amounts are distributed to him, and we do not take a tax deduction on these amounts until they are distributed.

NAME	PLAN OR AWARD	EXECUTIVE CONTRIBUTIONS IN LAST FISCAL YEAR ($)	REGISTRANT CONTRIBUTIONS IN LAST FISCAL YEAR ($)[a]	AGGREGATE EARNINGS IN LAST FISCAL YEAR ($)[b]	AGGREGATE WITHDRAWALS/ DISTRIBUTIONS IN LAST FISCAL YEAR ($)	AGGREGATE BALANCE AT FISCAL YEAR-END ($)[c]
David M. Solomon	Vested and Undelivered RSUs	—	—	(4,772,989)	177,802	9,429,137
John E. Waldron	Vested and Undelivered RSUs	—	—	(3,903,797)	145,423	7,712,030
Stephen M. Scherr	Vested and Undelivered RSUs	—	—	(3,590,333)	133,746	7,092,776
R. Martin Chavez	Vested and Undelivered RSUs	—	—	(4,530,725)	168,777	8,950,539
Richard J. Gnodde	Vested and Undelivered RSUs	—	12,538,210	(9,482,896)	12,111,862	19,351,740
Timothy J. O'Neill	Vested and Undelivered RSUs	—	—	(4,865,329)	181,242	9,611,556
Lloyd C. Blankfein	Vested and Undelivered RSUs	—	—	(1,366,151)	50,891	2,698,860
	NQDC Plan	—	—	(131,396)	—	1,913,169[d]

(a) Value was determined by multiplying the aggregate number of RSUs by $250.97, the closing price per share of our Common Stock on the NYSE on January 18, 2018, the grant date. In accordance with SEC rules, the *—2018 Summary Compensation Table* and *—2018 Grants of Plan-Based Awards* sections include the grant date fair value of the 2017 Year-End RSUs calculated in accordance with ASC 718.

(b) Aggregate earnings include changes in the market value of the shares of Common Stock underlying Vested and Undelivered RSUs during 2018. In addition, each RSU (other than the RSUs granted to Mr. Gnodde in respect of his 2017 year-end variable compensation) includes a dividend equivalent right, pursuant to which the holder is entitled to receive an amount equal to any ordinary cash dividends paid to the holder of a share of Common Stock approximately when those dividends are paid to shareholders. Amounts earned and paid on vested RSUs during 2018 pursuant to dividend equivalent rights also are included. The vested RSUs included in these amounts and their delivery dates are as follows (to the extent received by each NEO):

VESTED RSUS	DELIVERY
2017 Year-End RSUs	With respect to Mr Gnodde's 2017 Fixed Allowance RSUs, one-third delivered in January 2019 and one-third deliverable on or about the second and third anniversaries of grant; with respect to Mr. Gnodde's other 2017 Year-End RSUs, one-fifth deliverable on or about the third through seventh anniversaries of grant.
2016 Year-End RSUs	With respect to Messrs. Solomon, Waldron, Scherr, Chavez and O'Neill, one-third delivered in each of December 2017 and January 2019 and one-third deliverable on or about the third anniversary of grant. With respect to Mr. Gnodde, for his 2016 Fixed Allowance RSUs, one-third delivered in each of January 2018 and January 2019 and one-third deliverable on or about the third anniversary of grant; for his other 2016 Year-End RSUs, one-fifth deliverable on or about the third through seventh anniversaries of grant.
2015 Year-End RSUs	With respect to Messrs. Solomon, Waldron, Scherr, Chavez and O'Neill, one-third delivered in each of January 2017, December 2017 and January 2019; with respect to Mr. Gnodde, one-third delivered in each of January 2017, January 2018 and January 2019.
2014 Year-End RSUs (RSUs granted in January 2015 for services in 2014)	With respect to Messrs. Solomon, Waldron, Scherr, Chavez, O'Neill and Blankfein, one-third delivered in each of January 2016, January 2017 and December 2017; with respect to Mr. Gnodde, approximately 17% of his 2014 Year-End RSUs were delivered in July 2015, with the remainder delivered in approximately equal installments in each of January 2016, January 2017 and January 2018.

Delivery of shares of Common Stock underlying RSUs may be accelerated in certain limited circumstances (for example, in the event that the holder of the RSU dies or leaves the firm to accept a governmental position where retention of the RSU would create a conflict of interest). See *—Potential Payments Upon Termination or Change in Control* for treatment of the RSUs upon termination of employment.

With respect to our NQDC Plan, Mr. Blankfein's account balance was adjusted to reflect gains (or losses) based on the performance of certain "notional investments" (selected by Mr. Blankfein from various hedge funds and mutual funds available under the plan in 2018) to the same extent as if he had actually invested in those funds.

(c) The Vested and Undelivered RSUs included in these amounts are 2017 Year-End RSUs, 2016 Year-End RSUs and 2015 Year-End RSUs. These stock awards were previously reported in the Summary Compensation Table (to the extent that the NEO was a named executive officer in the applicable year of grant). Values for RSUs were determined by multiplying the number of RSUs by $167.05, the closing price per share of our Common Stock on the NYSE on December 31, 2018 (the last trading day of the year).

(d) This amount also reflects a deferral of compensation of $1,000,000 previously reported as bonus in each of the fiscal 2005 and 2006 Summary Compensation Tables for Mr. Blankfein.

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

Our NEOs do not have employment, "golden parachute" or other agreements providing for severance pay.

Our PCP, The Goldman Sachs Amended and Restated Stock Incentive Plan (2018) and its predecessor plans, and our retiree healthcare program may provide for potential payments to our NEOs in conjunction with a termination of employment. The amounts potentially payable to our NEOs under our pension plans, vested RSUs and our NQDC Plan are set forth under the *—2018 Pension Benefits* and *—2018 Non-Qualified Deferred Compensation* sections above. The terms of the outstanding PSUs and LTIP awards are not affected by a future termination of employment or change in control (absent circumstances constituting "cause" – e.g., any material violation of any firm policy or other conduct detrimental to our firm), except that, following a change in control, our Compensation Committee may not amend the terms of the LTIP awards with respect to an NEO without the NEO's consent.

Each of our NEOs participated in our PCP in 2018. Under our PCP, if a participant's employment at Goldman Sachs terminates for any reason before the end of a "contract period" (generally a two-year period as defined in the PCP), our Compensation Committee has the discretion to determine what, if any, variable compensation will be provided to the participant for services provided in that year, subject to the formula in the PCP. There is no severance provided under our PCP.

Set forth below is a calculation of the potential benefits to each of our NEOs (other than Mr. Blankfein) assuming a termination of employment occurred on December 31, 2018, in accordance with SEC rules. Details regarding Mr. Blankfein's retirement are provided separately below. The narrative disclosure that follows the table provides important information and definitions regarding specific payment terms and conditions.

TERMINATION REASON	NAME	VALUE OF UNVESTED RSUS, RESTRICTED STOCK AND PSUS THAT VEST UPON TERMINATION ($)	PRESENT VALUE OF PREMIUMS FOR RETIREE HEALTHCARE PROGRAM[e] ($)	TOTAL ($)
Cause or Termination with Violation[a]	**David M. Solomon**	0	0	0
	John E. Waldron	0	0	0
	Stephen M. Scherr	0	0	0
	R. Martin Chavez	0	0	0
	Richard J. Gnodde	0	0	0
	Timothy J. O'Neill	0	0	0
Termination without Violation[a], Death[b], Change in Control, Disability or Conflicted Employment[c] or Downsizing[d]	**David M. Solomon**	0	164,150	164,150
	John E. Waldron	0	451,231	451,231
	Stephen M. Scherr	0	367,884	367,884
	R. Martin Chavez	0	459,212	459,212
	Richard J. Gnodde	0	210,289	210,289
	Timothy J. O'Neill	0	272,148	272,148

(a) Except as discussed below, upon an NEO's termination without Violation (as defined below), shares of Common Stock underlying RSUs will continue to be delivered on schedule (and transfer restrictions will continue to apply until the applicable transferability date), transfer restrictions will continue to apply to restricted stock until the applicable transferability date, and PSUs will continue to be eligible to be earned pursuant to their existing terms, provided that the NEO does not become associated with a Covered Enterprise (as defined below). If the NEO becomes associated with certain entities, including certain Covered Enterprises, the NEO may forfeit some or all of his benefits and/or coverage under our retiree healthcare program. Additionally, if the NEO becomes associated with a Covered Enterprise, for 2017 Year-End RSUs and 2017 Year-End Restricted Stock, the NEO generally would have forfeited all of these awards if the association occurred in 2018; will forfeit two-thirds of these awards if the association occurs in 2019; and will forfeit one-third of these awards if the association occurs in 2020. For 2017 Year-End PSUs, the NEO generally would forfeit all of these awards if the association occurred or occurs in 2018, 2019 or 2020. For 2016 Year-End RSUs, the NEO generally would have forfeited all of these awards if the association occurred in 2017; would have forfeited two-thirds of these awards if the association occurred in 2018; and will forfeit one-third of these awards if the association occurs in 2019. For 2015 Year-End RSUs, the NEO generally would have forfeited one-third of these awards if the association had occurred in 2018.

This restriction may be removed upon a termination of employment that is characterized by us as "involuntary" or by "mutual agreement" if the individual executes an appropriate general waiver and release of claims and an agreement to pay any associated tax liability.

The occurrence of a Violation, including any event constituting Cause (as defined below) or the Solicitation (as defined below) of employees or clients of our firm, by an NEO prior to delivery or settlement of RSUs and PSUs will result in forfeiture of all RSUs and PSUs, and in some cases may result in the NEO having to repay amounts previously received. In the event of certain Violations (for example, NEO engaging in Cause) following delivery of Shares at Risk underlying RSUs or PSUs but prior to the lapse of transfer restrictions, these shares also may be required to be returned to the firm.

RSU and PSU awards also are subject to risk-related clawback provisions included in the definition of Violations below. As a result of these provisions, for example, an NEO will forfeit certain of his outstanding equity-based awards and any shares of Common Stock or other amounts delivered under these awards may be recaptured, if our Compensation Committee determines that his failure to properly consider risk in 2017 (with respect to 2017 Year-End RSUs, Restricted Stock and PSUs), 2016 (with respect to 2016 Year-End RSUs), or 2015 (with respect to 2015 Year-End RSUs) has, or reasonably could be expected to have, a material adverse impact on his business unit, our firm or the broader financial system.

For 2015, 2016 and 2017 Year-End RSUs, 2017 Year-End Restricted Stock and 2017 Year-End PSUs granted to our NEOs, if the firm is required to prepare an accounting restatement due to its material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws as described in Section 304(a) of Sarbanes-Oxley, the NEO's rights to the award will terminate and be subject to repayment to the same extent that would be required under Section 304 of Sarbanes-Oxley had the NEO been a "chief executive officer" or "chief financial officer" of the firm (regardless of whether the NEO actually held such position at the relevant time).

Notwithstanding the foregoing, pursuant to regulatory guidance, Mr. Gnodde's fixed allowance RSUs are not subject to the clawback and forfeiture provisions that apply to year-end RSUs. See page 49 for more details.

(b) In the event of an NEO's death, delivery of shares of Common Stock underlying RSUs is accelerated. Any transfer restrictions on the shares of Common Stock underlying RSUs and/or shares of restricted stock are removed. The terms of the PSUs are not affected by the NEO's death. For information on the number of PSUs and vested RSUs held by the NEOs at year-end, see *—2018 Outstanding Equity Awards at Fiscal Year-End* and *—2018 Non-Qualified Deferred Compensation* above. These amounts do not reflect, in the case of death, the payment of a death benefit under our executive life insurance plan, which provides each NEO with term life insurance coverage through age 75 (a $4.5 million benefit for each NEO other than Mr. Waldron, who elected coverage at the minimum level under such plan).

(c) If a Change in Control (as defined below) occurs, and within 18 months thereafter we terminate an NEO's employment without Cause or if the NEO terminates his employment for Good Reason (as defined below), delivery of shares of Common Stock underlying RSUs is accelerated and any transfer restrictions on the shares of Common Stock underlying RSUs and/or shares of restricted stock are removed. The terms of the PSUs are not affected. For RSUs and Shares at Risk delivered in respect of PSUs and RSUs, certain forfeiture provisions no longer apply.

In the case of a disability, provided that the NEO does not become associated with a Covered Enterprise, shares of Common Stock underlying RSUs continue to deliver on schedule and PSUs continue to be eligible to be earned pursuant to their existing terms. If the NEO does become associated with a Covered Enterprise, the awards would be treated as set forth in footnote (a) above for that situation.

In the case of a termination in which an NEO resigns and accepts a position that is deemed Conflicted Employment (as defined below), the NEO will receive, at our sole discretion, (i) with respect to RSUs, either a cash payment or an accelerated delivery of, and removal of transfer restrictions on, the shares of Common Stock underlying those RSUs; and (ii) with respect to restricted stock, removal of transfer restrictions on such shares of restricted stock. Additionally, in the event of such a termination, our Compensation Committee may determine to amend the terms of any then-outstanding LTIP awards or PSUs held by the NEO.

(d) In the event of a termination due to Downsizing (as described below), shares of Common Stock underlying RSUs deliver on schedule and PSUs continue to be eligible to be earned on their existing terms.

(e) PMDs with eight or more years of service as a PMD are eligible to receive medical and dental coverage under our retiree healthcare program for themselves and eligible dependents through our firm at a 75% subsidy. Each of our NEOs is eligible for this coverage. The values shown in this column reflect the present value of the cost to us of the 75% subsidy and were determined using a December 31, 2018 retirement date and the following assumptions: a 4.56% discount rate; mortality estimates based on the S1PMA_L table (Mr. Gnodde) and the RP-2014 white collar fully generational mortality table, with adjustments to reflect continued improvements in mortality based on Scale MP-2018 (other NEOs); estimates of future increases in healthcare subsidy costs of 2.5% for medical and pharmacy and 5.25% for dental; and assumptions for subsequent eligibility for alternative coverage, which would eliminate subsidies under our program (60% firm subsidized and 40% not firm subsidized). Values and assumptions shown reflect that effective January 1, 2020, the value of the benefit under our U.S. retiree healthcare program will not exceed the annual limits under Section 4980I of the Code.

Retirement of Mr. Blankfein

Mr. Blankfein did not receive any payments or other benefits in connection with his retirement; although he meets the eligibility requirements for our PMD retiree healthcare program described in footnote (e) to the table above (the present value of which as of December 31, 2018 was $256,418, calculated using the same assumptions described in footnote (e)), at this time Mr. Blankfein is instead receiving coverage in his capacity as Senior Chairman. Please see *—Compensation Discussion and Analysis—Senior Chairman Agreement with Mr. Blankfein* for additional details regarding arrangements in connection with Mr. Blankfein's Senior Chairman role.

Other Terms

As PMDs, our NEOs are generally subject to a policy of 90 days' notice of termination of employment. We may require that an NEO be inactive (i.e., on "garden leave") during the notice period (or we may waive the requirement).

For purposes of describing our RSUs and PSUs, the above-referenced terms have the following meanings:

"Cause" means the NEO (a) is convicted in a criminal proceeding on certain misdemeanor charges, on a felony charge or an equivalent charge, (b) engages in employment disqualification conduct under applicable law, (c) willfully fails to perform his or her duties to Goldman Sachs, (d) violates any securities or commodities laws, rules or regulations or the rules and regulations of any relevant exchange or association of which we are a member, (e) violates any of our policies concerning hedging or pledging or confidential or proprietary information, or materially violates any other of our policies, (f) impairs, impugns, denigrates, disparages or negatively reflects upon our name, reputation or business interests or (g) engages in conduct detrimental to us.

"Change in Control" means the consummation of a business combination involving Goldman Sachs, unless immediately following the business combination either:

- At least 50% of the total voting power of the surviving entity or its parent entity, if applicable, is represented by securities of Goldman Sachs that were outstanding immediately prior to the transaction (or by shares into which the securities of Goldman Sachs are converted in the transaction); or
- At least 50% of the members of the board of directors of the surviving entity, or its parent entity, if applicable, following the transaction were, at the time of our Board's approval of the execution of the initial agreement providing for the transaction, directors of Goldman Sachs on the date of grant of the RSUs (including directors whose election or nomination was approved by two-thirds of the incumbent directors).

"Conflicted Employment" occurs where (a) a participant resigns solely to accept employment at any U.S. federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by our Compensation Committee, and as a result of such employment the participant's continued holding of our equity-based awards would result in an actual or perceived conflict of interest, or (b) a participant terminates employment and then notifies us that he/she has accepted or intends to accept employment of the nature described in clause (a). For awards granted after 2016, employment with an "Accounting Firm" within the meaning of SEC Rule 2-01(f)(2) of Regulation S-X will not be considered "Conflicted Employment."

"Covered Enterprise" includes any existing or planned business enterprise that (a) offers, holds itself out as offering or reasonably may be expected to offer products or services that are the same as or similar to those offered by us or that we reasonably expect to offer or (b) engages in, holds itself out as engaging in or reasonably may be expected to engage in any other activity that is the same as or similar to any financial activity engaged in by us or in which we reasonably expect to engage.

Whether employment is terminated by reason of "*Downsizing*" is determined solely by us.

"*Good Reason*" means (a) as determined by our Compensation Committee, a materially adverse change in the NEO's position or nature or status of the NEO's responsibilities from those in effect immediately before the Change in Control or (b) Goldman Sachs requiring the NEO's principal place of employment to be located more than 75 miles from the location where the NEO is principally employed at the time of the Change in Control (except for required travel consistent with the NEO's business travel obligations in the ordinary course prior to the Change in Control).

"Solicitation" means any direct or indirect communication of any kind whatsoever (regardless of who initiated), inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

"Violation" includes any of the following:

- Engaging in materially improper risk analysis or failing to sufficiently raise concerns about risks during the year for which the award was granted;
- Soliciting our clients or prospective clients to transact business with a Covered Enterprise, or to refrain from doing business with us or interfering with any of our client relationships;
- Failing to perform obligations under any agreement with us;
- Bringing an action that results in a determination that the terms or conditions for the settlement of RSUs or PSUs are invalid;
- Attempting to have a dispute under our equity compensation plan or the applicable award agreement resolved in a manner other than as provided for in our equity compensation plan or the applicable award agreement;
- Any event constituting Cause;
- Failing to certify compliance to us or otherwise failing to comply with the terms of our equity compensation plan or the applicable award agreement;
- Upon the termination of employment for any reason, receiving grants of cash, equity or other property (whether vested or unvested) from an entity to which the NEO provides services, to replace, substitute for or otherwise in respect of the NEO's RSUs, PSUs or Shares at Risk;
- Soliciting any of our employees to resign from us or soliciting certain employees to apply for or accept employment (or other association) with any person or entity other than us;
- Hiring or participating in the hiring of certain employees by any person or entity other than us, whether as an employee or consultant or otherwise;
- If certain employees are solicited, hired or accepted into partnership, membership or similar status by (a) any entity that the NEO forms, that bears the NEO's name, or in which the NEO possesses or controls greater than a de minimis equity ownership, voting or profit participation or (b) any entity where the NEO has, or will have, direct or indirect managerial responsibility for such employee; or
- Our firm failing to maintain our "minimum tier 1 capital ratio" (as defined in the Federal Reserve Board regulations) for 90 consecutive business days or the Federal Reserve Board or Federal Deposit Insurance Corporation (FDIC) making a written recommendation for the appointment of the FDIC as a receiver based on a determination that we are "in default" or "in danger of default."

Report of our Compensation Committee

Our Compensation Committee reviewed the CD&A, as prepared by management of Goldman Sachs, and discussed the CD&A with management of Goldman Sachs. Semler Brossy and the CRO also reviewed the CD&A. Based on the Committee's review and discussions, the Committee recommended to the Board that the CD&A be included in this Proxy Statement.

Compensation Committee

Michele Burns, Chair
William George
James Johnson
Ellen Kullman
Lakshmi Mittal
Adebayo Ogunlesi (ex-officio)

Item 2. An Advisory Vote to Approve Executive Compensation (Say on Pay)

Proposal Snapshot – Item 2. Say on Pay

What is being voted on: An advisory vote to approve the compensation of all of our NEOs.

Board recommendation: Our Board unanimously recommends a vote FOR the resolution approving the executive compensation of our NEOs.

Our Say on Pay vote gives our shareholders the opportunity to cast an advisory vote to approve the compensation of all of our NEOs. We currently include this advisory vote on an annual basis.

We encourage you to review the following sections of this Proxy Statement for further information on our key compensation practices and the effect of shareholder feedback on NEO compensation:

- "Compensation Highlights" in our Executive Summary (see page 6);
- "2018 NEO Compensation Determinations" in our CD&A (see page 36);
- "Say on Pay & Shareholder Engagement" in our CD&A (see page 38); and
- "Key Pay Practices" (see page 45).

Please note that these sections should be read in conjunction with our entire CD&A (beginning on page 36), as well as the executive compensation tables and related disclosure that follow (beginning on page 57).

2018 SAY ON PAY VOTE

As required by Section 14A of the Exchange Act, the below resolution gives shareholders the opportunity to cast an advisory vote on the compensation of our NEOs, as disclosed in this Proxy Statement, including the CD&A, the executive compensation tables and related disclosure.

Accordingly, we are asking our shareholders to vote on the following resolution:

RESOLVED, that the holders of Common Stock approve the compensation of our named executive officers as disclosed in this Proxy Statement pursuant to Item 402 of Regulation S-K, including the Compensation Discussion and Analysis, the executive compensation tables and related disclosure.

As this is an advisory vote, the result will not be binding, although our Compensation Committee will consider the outcome of the vote when evaluating the effectiveness of our compensation principles and practices and in connection with its compensation determinations.

For detailed information on the vote required for this matter and the choices available for casting your vote, please see *Frequently Asked Questions*.

Pay Ratio Disclosure

- In accordance with SEC rules, we have calculated the ratio between the 2018 compensation of our current CEO, Mr. Solomon, and the median of the 2018 compensation of all of our employees (other than the CEO) (Median Compensation Amount).
- Using reasonable estimates and assumptions where necessary, we have determined that the Median Compensation Amount (calculated in accordance with SEC rules) for 2018 is $136,513.
  - » In accordance with SEC rules, we identified the employee who received the Median Compensation Amount as of December 31, 2017 using the firm's standard internal compensation methodology known as "per annum total compensation," which measures each employee's fixed compensation and incentive compensation for a particular year, with appropriate prorations made to reflect actual compensation paid to part-time employees and currency conversions as applicable.
  - » SEC rules permit identification of this median employee once every three years. As such, the Median Compensation Amount for 2018 reflects the 2018 "per annum total compensation" of the employee we identified as of December 31, 2017, given that there has been no change in our employee population or employee compensation arrangements that we believe would significantly impact pay ratio disclosure.
- Mr. Solomon's compensation for 2018, as disclosed in the Summary Compensation Table, is $20,662,835, and the ratio between this amount and the Median Compensation Amount is approximately 151:1.
- Our Compensation Principles, described in more detail on page 46, apply to all of our people, regardless of their compensation level, and reflect the importance of (1) paying for performance; (2) encouraging firmwide orientation and culture; (3) discouraging imprudent risk-taking; and (4) attracting and retaining talent.

Non-Employee Director Compensation Program

DIRECTOR COMPENSATION OVERVIEW

Our Governance Committee is focused on ensuring that our Director Compensation Program:

- Is designed to attract and retain **highly qualified** and **diverse** directors
- Appropriately values the **significant time commitment** required of our non-employee directors
- Effectively and meaningfully aligns directors with **long-term shareholder interests**
- Recognizes the **highly regulated** and complex nature of our global business and the requisite skills and experience represented among our Board members
- Takes into account the **focus** on Board governance and oversight at financial firms
- Reflects the **shared responsibility** of all directors

Significant Time Commitment By Directors

In addition to preparation for and attendance at regular and special meetings (63 total in 2018), our directors are engaged in a variety of other ways, including:

- Receive postings on significant developments and weekly informational packages
- Ongoing communication and meetings with each other, senior management and key employees around the globe
- Meetings with our regulators
- Participation in firm and industry conferences and other external engagements on behalf of the Board
- Engagement with our shareholders

For additional information, see *Corporate Governance—Structure of our Board and Governance Practices—Commitment of our Board.*

Key Features of Director Compensation Program

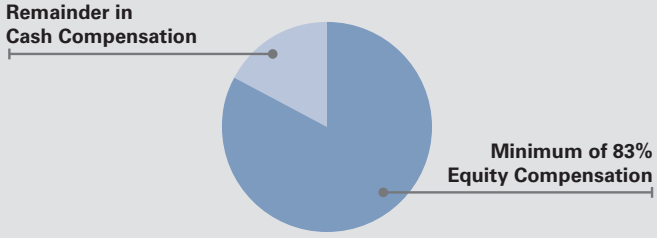
Program features emphasize long-term alignment between director and shareholder interests.

What We Do

✓ **Emphasis on Equity Compensation:** The overwhelming majority of director compensation is paid in vested equity-based awards (RSUs). Directors may receive 100% of their director compensation in RSUs at their election

✓ **Hold-Past Retirement Requirement:**
- Non-employee directors **must hold all RSUs granted to them during their entire tenure**
- Shares of Common Stock underlying the RSUs **do not deliver until well after a director's retirement**; this period can range from 6 months to up to 18 months, depending upon the timing of retirement

✓ **Equity Ownership Requirements:** All non-employee directors are required, within three years of becoming a director, **to own at least 5,000 shares** of Common Stock or vested RSUs



What We Don't Do

✘ No fees for attending meetings – attendance is expected and compensation is not dependent on Board meeting schedule

✘ No undue focus on short-term stock performance – director pay aligns with compensation philosophy, not short-term fluctuations in stock price

✘ No hedging or pledging of RSUs permitted

✘ No hedging of shares of Common Stock permitted

✘ No director has shares of Common Stock subject to a pledge

For additional information regarding matters relating to our Director Compensation Program, see page 89.

2018 DIRECTOR COMPENSATION PROGRAM

Our Governance Committee reviews the form and amount of our Director Compensation Program annually, taking into account:

- Advice from its independent consultant
- Structure of our program and overall amount of compensation
- Feedback from investors
- Benchmarking against form, structure and amount of peer director compensation

Both the quantum and the structure of our Director Compensation Program are designed to support the key objectives set forth on the prior page, including but not limited to the alignment of director interests with long-term shareholder interests such as through the hold-past retirement requirement for 100% of the equity component of the program. Our Director Compensation Program has not changed since 2014, when our Governance Committee proactively determined to set the annual equity award as a dollar amount rather than a fixed number of RSUs, as had previously been the case, to, among other things, mitigate the effect of short-term stock price performance on the amount of director compensation. This change had the effect of lowering the amount of director compensation in 2014 and ensuring that future pay does not automatically escalate with appreciation in our Common Stock. Accordingly, the 2018 Director Compensation Program consists of:

COMPONENTS OF DIRECTOR COMPENSATION PROGRAM FOR 2018 SERVICE*	VALUE OF AWARD	FORM OF PAYMENT
Annual RSU Grant	$500,000	2,512 RSUs
Annual Retainer	$75,000	377 RSUs or $75,000, as per election
Committee Chair Fee (if applicable)	$25,000	126 RSUs or $25,000, as per election

* Compensation is prorated, as applicable, according to the number of months served. In connection with Board service, our directors do not receive any incremental fees for attending Board or Committee meetings, and neither Mr. Solomon nor Mr. Blankfein received any incremental compensation for service on our Board.

2018 DIRECTOR COMPENSATION PROGRAM TABLE

The table below indicates the elements and total amount of compensation determined by our Board to be awarded to each non-employee director for services performed in 2018.

NAME	ANNUAL GRANT IN RSUS	ANNUAL RETAINER	COMMITTEE CHAIR FEE	TOTAL COMPENSATION ($)[a]
Michele Burns	✓	✓	✓	600,000
Drew Faust[b]	✓	✓		287,500
Mark Flaherty	✓	✓		575,000
William George	✓	✓	✓	600,000
James Johnson	✓	✓	✓[c]	585,417
Ellen Kullman	✓	✓		575,000
Lakshmi Mittal	✓	✓		575,000
Adebayo Ogunlesi	✓	✓	✓	600,000
Peter Oppenheimer	✓	✓	✓	600,000
Jan Tighe[d]	✓	✓		47,917
David Viniar	✓	✓		575,000
Mark Winkelman	✓	✓	✓[e]	591,667

(a) Paid in the form of cash and/or RSUs granted on January 17, 2019, as described above.

(b) Dr. Faust joined our Board in July 2018 and received compensation prorated for the six months she served as a director in 2018.

(c) Mr. Johnson served as Chair of our Compensation Committee until May 2018 and received a Committee Chair fee prorated for the five months he served as a Committee Chair in 2018.

(d) Vice Admiral Tighe joined our Board in December 2018 and received compensation prorated for the one month she served as a director in 2018.

(e) Mr. Winkelman has served as Chair of our Risk Committee since May 2018 and received a Committee Chair fee prorated for the eight months he served as a Committee Chair in 2018.

RETENTION OF INDEPENDENT NON-EMPLOYEE DIRECTOR COMPENSATION CONSULTANT

In 2018, our Governance Committee reappointed Frederic W. Cook & Co., Inc. (FW Cook), a compensation consultant, to conduct an independent review of our non-employee director compensation program.

FW Cook assessed the structure of our non-employee director compensation program and its value compared to competitive market practices. FW Cook determined that the firm's compensation program remained competitive with the market and continued to align the interests of our non-employee directors with the long-term interests of our shareholders. This assessment took into account the decision to fix the annual equity award as a dollar amount rather than a share amount in 2014, as well as the program's emphasis on equity compensation and the holding requirements and other restrictions on the RSUs. The duties of our non-employee directors were also taken into consideration, including the ongoing oversight responsibilities required of our directors by the regulatory environment in which we operate. As a result of its assessment, FW Cook confirmed that it supported the continuation of our non-employee director compensation program without changes to either amount or design.

Our Governance Committee considered this review in determining to recommend to the Board that it make no changes to our non-employee director compensation program for 2018, which recommendation was accepted by the Board.

In connection with the engagement of FW Cook, our Governance Committee considered certain information regarding FW Cook's relationship with our firm, including that FW Cook provides no services to our firm other than to our Governance Committee, the fees paid by our firm to FW Cook for this analysis in the context of FW Cook's total revenues, that FW Cook has no significant business or personal relationship with any member of our Governance Committee or any executive officer and that none of the members of FW Cook's consulting team for our firm owns any shares of our Common Stock. Considering this information, our Governance Committee determined that FW Cook is independent and does not have conflicts of interest in providing services to our Governance Committee.

DIRECTOR SUMMARY COMPENSATION TABLE

The following table sets forth the 2018 compensation for our non-employee directors as determined by SEC rules, which require us to include equity awards granted during 2018 and cash compensation earned for 2018. Generally, we grant equity-based awards and pay any cash compensation to our non-employee directors for a particular year shortly after that year's end. Accordingly, this table includes RSUs granted in January 2018 for services performed in 2017 and cash paid in January 2019 for services performed in 2018 for those directors who received cash payments.

	FEES EARNED OR PAID IN CASH ($) [a]	STOCK AWARDS ($) [b]	ALL OTHER COMPENSATION ($) [c]	TOTAL ($)
Michele Burns	100,000	500,184	19,986	620,170
Drew Faust	37,500	0	17,500	55,000
Mark Flaherty	75,000	500,184	20,000	595,184
William George	0	600,321	20,000	620,321
James Johnson	10,417	500,184	20,000	530,601
Ellen Kullman	0	575,224	20,000	595,224
Lakshmi Mittal	0	575,224	0	575,224
Adebayo Ogunlesi	0	600,321	20,000	620,321
Peter Oppenheimer	0	600,321	20,000	620,321
David Viniar[d]	75,000	500,184	20,000	595,184
Mark Winkelman	0	575,224	45,000	620,224

(a) For 2018, Ms. Burns elected to receive her annual retainer and Committee Chair fee in cash, Mr. Johnson elected to receive his prorated Committee Chair fee in cash, and Messrs. Flaherty and Viniar and Dr. Faust elected to receive their annual retainers (prorated for Dr. Faust) in cash.

(b) The grant date fair value of RSUs granted on January 18, 2018 for service in 2017 was based on the closing price per share of Common Stock on the NYSE on the date of grant ($250.97). These RSUs were vested upon grant and provide for delivery of the underlying shares of Common Stock on the first eligible trading day in the third quarter of the year following the year of the director's retirement from our Board.

(c) These values reflect the amounts that were donated to charities by our firm to match personal donations made by non-employee directors in connection with requests by these directors made prior to March 4, 2019 under the Goldman Sachs employee matching gift program for 2018. We allow our directors to participate in our employee matching gift program on the same terms as our non-PMD employees, matching gifts of up to $20,000 per participating individual. For Mr. Winkelman, the amount also represents an annual cash fee of $25,000 for his service as a member of the board of directors of our subsidiary, Goldman Sachs International, during 2018.

(d) Due to his prior employment as CFO, Mr. Viniar continued to be able to recommend not-for-profit organizations that should receive donations from GS Gives as discussed in *Compensation Matters—Compensation Discussion and Analysis—GS Gives*. The amount donated to not-for-profit organizations by GS Gives based on Mr. Viniar's recommendations in 2018 was $3,995,000.

Please refer to page 86 for information pertaining to the outstanding equity awards (all of which are vested) held by each non-employee director as of March 4, 2019, including RSUs granted in January 2019 for services performed in 2018.

For more information on the work of our Board and its Committees, see *Corporate Governance*.

Audit Matters

Item 3. Ratification of PwC as our Independent Registered Public Accounting Firm for 2019

Proposal Snapshot —Item 3. Ratification of PwC as our Independent Registered Public Accounting Firm for 2019

What is being voted on: Ratification of the appointment of PwC as our independent registered public accounting firm.

Board recommendation: Our Board unanimously recommends a vote FOR ratification of the appointment of PwC as our independent registered public accounting firm for 2019.

Our Audit Committee is directly responsible for the appointment, compensation, retention and oversight of the independent registered public accounting firm retained to audit our financial statements. Our Audit Committee has appointed PwC as our independent registered public accounting firm for 2019. We are submitting the appointment of our independent registered public accounting firm for shareholder ratification at our Annual Meeting, as we do each year.

ASSESSMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The members of our Audit Committee and our Board believe that the continued retention of PwC as our independent registered public accounting firm is in the best interests of our firm and our shareholders. In making this determination, our Audit Committee considered a variety of factors, including:

- Independence
- Candor & insight provided to Audit Committee
- Proactivity
- Ability to meet deadlines & respond quickly
- Feasibility / benefits of audit firm / lead partner rotation
- Content, timeliness & practicality of PwC communications with management
- Adequacy of information provided on accounting issues, auditing issues & regulatory developments affecting financial institutions
- Timeliness & accuracy of all services presented to Audit Committee for pre-approval & review
- Management feedback
- Lead partner performance
- Comprehensiveness of evaluations of internal control structure

In particular, our Audit Committee took into account:

Key Considerations of PwC

Audit Quality and Efficiency

- PwC's knowledge of the firm's business allows it to design and enhance its audit plan by focusing on core and emerging risks, investing in technology to increase efficiency and capturing costs efficiencies through iteration.
- PwC has a global footprint and the expertise and capability necessary to handle the breadth and complexity of the audit of the firm's global business, accounting practices and internal control over financial reporting.

Candid and Timely Feedback

- PwC generally attends each meeting of our Audit and Risk Committees and meets regularly in closed sessions with our Audit Committee so that it can provide candid feedback to the Committees regarding management's control frameworks to address existing and new risks.
- PwC's familiarity with the firm's control infrastructure and accounting practices allow it to analyze the impact of business or regulatory changes in a timely manner and provide our Audit Committee with an effective, independent evaluation of management's strategies, implementation plans and/or remediation efforts.

Independence

- PwC is an independent public accounting firm and is subject to inspections by the United States Public Company Accounting Oversight Board (PCAOB) (the results of which are communicated to our Audit Committee), Big 4 peer reviews, PCAOB oversight and is subject to SEC regulations.

- Both the firm and PwC have controls to ensure the continued independence of PwC, including firm policies limiting the hiring of audit team members and PwC policies and procedures to maintain independence.
- Mandatory audit partner rotation ensures a regular influx of fresh perspective balanced by the benefits of having a tenured auditor with institutional knowledge.

Audit Committee's Controls

- Frequent closed sessions with PwC as well as a comprehensive annual evaluation.
- Direct involvement by our Audit Committee and our Audit Committee Chair in the periodic selection of PwC's new lead engagement partner.
- Responsibility for the audit fee negotiations associated with the retention of PwC, including considering the appropriateness of fees relative to both efficiency and audit quality.
- Advance approval (by Audit Committee or Audit Committee Chair) of all services rendered by PwC to us and our consolidated subsidiaries. These services include audit, audit-related services (including attestation reports, employee benefit plan audits, accounting and technical assistance, risk and control services and due diligence-related services) and tax services, subject to quarterly fee limits applicable to each project and to each category of services.
- Review of information regarding PwC's periodic internal quality reviews of its audit work, external data on audit quality and performance such as feedback provided by the PCAOB and PwC's conformance with its independence policies and procedures.

We are asking shareholders to ratify the appointment of PwC as our independent registered public accounting firm as a matter of good corporate practice, although we are not legally required to do so. If our shareholders do not ratify the appointment, our Audit Committee will reconsider whether to retain PwC, but still may retain them. Even if the appointment is ratified, our Audit Committee, in its discretion, may change the appointment at any time during the year if it determines that such a change would be in the best interests of our firm and our shareholders.

A representative of PwC is expected to be present at our Annual Meeting, will have the opportunity to make a statement if he or she desires to do so and will be available to respond to appropriate questions from shareholders.

FEES PAID TO INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The following table provides information about fees paid by us to PwC.

	2018 ($ IN MILLIONS)	PERCENT OF 2018 SERVICES APPROVED BY AUDIT COMMITTEE	2017 ($ IN MILLIONS)	PERCENT OF 2017 SERVICES APPROVED BY AUDIT COMMITTEE
Audit fees	63.1	100%	54.7	100%
Audit-related fees[(a)]	9.6	100%	7.6	100%
Tax fees[(b)]	2.7	100%	2.1	100%
All other fees	—	—	—	—

(a) Audit-related fees include attest services not required by statute or regulation and employee benefit plan audits.

(b) The nature of the tax services is as follows: tax return preparation and compliance, tax advice relating to transactions, consultation on tax matters and other tax planning and advice. Of the $2.7 million for 2018, approximately $1.4 million was for tax return preparation and compliance services.

PwC also provides audit and tax services to certain merchant banking, asset management and similar funds managed by our subsidiaries. Fees paid to PwC by these funds for these services were $77.0 million in 2018 and $70.1 million in 2017.

For detailed information on the vote required for this matter and the choices available for casting your vote, please see *Frequently Asked Questions*.

Report of our Audit Committee

Management is responsible for the preparation, presentation and integrity of Goldman Sachs' financial statements, for its accounting and financial reporting principles and for the establishment and effectiveness of internal controls and procedures designed to ensure compliance with generally accepted accounting principles and applicable laws and regulations. The independent registered public accounting firm is responsible for performing an independent audit of Goldman Sachs' financial statements and of its internal control over financial reporting in accordance with the standards of the PCAOB and expressing an opinion as to the conformity of Goldman Sachs' financial statements with generally accepted accounting principles and the effectiveness of its internal control over financial reporting. The independent registered public accounting firm has free access to the Committee to discuss any matters they deem appropriate.

In performing its oversight role, the Committee has considered and discussed the audited financial statements with each of management and the independent registered public accounting firm. The Committee has also discussed with the independent registered public accounting firm the matters required to be discussed by applicable requirements of the PCAOB. The Committee has received the written disclosures from the independent registered public accounting firm in accordance with the applicable requirements of the PCAOB regarding the auditors' independence and has discussed with the registered public accounting firm its independence. The Committee, or the Committee Chair if designated by the Committee, approves in advance all audit and any non-audit services rendered by the independent registered public accounting firm to us and our consolidated subsidiaries. See *—Item 3. Ratification of PwC as our Independent Registered Public Accounting Firm for 2019*.

Based on the reports and discussions described in this Report, the Committee recommended to the Board that the audited financial statements of Goldman Sachs for 2018 be included in the 2018 Annual Report on Form 10-K.

Audit Committee

Peter Oppenheimer, Chair
Mark Flaherty
Adebayo Ogunlesi (ex-officio)
Jan Tighe*
Mark Winkelman

* Vice Admiral Tighe joined our Audit Committee on December 19, 2018.

Item 4. Shareholder Proposal

We are committed to active engagement with our shareholders. If you would like to speak with us, please contact our Investor Relations team at gs-investor-relations@gs.com.

Proposal Snapshot – Item 4. Shareholder Proposal

What is being voted on: In accordance with SEC rules, we have set forth below a shareholder proposal, along with the supporting statement of the shareholder proponent, for which we and our Board accept no responsibility. This shareholder proposal is required to be voted upon at our Annual Meeting only if properly presented at our Annual Meeting.

Board recommendation: As explained below, our Board unanimously recommends that you vote AGAINST this shareholder proposal.

For detailed information on the vote required with respect to this shareholder proposal and the choices available for casting your vote, please see *Frequently Asked Questions*.

Item 4. Shareholder Proposal Regarding Right to Act by Written Consent

John Chevedden, 2215 Nelson Avenue, No. 205, Redondo Beach, California, 90278, beneficial owner of 20 shares of Common Stock, is the proponent of the following shareholder proposal. Mr. Chevedden has advised us that a representative will present the proposal and related supporting statement at our Annual Meeting.

PROPONENT'S STATEMENT

Proposal 4 - Right to Act by Written Consent

Resolved, Shareholders request that our board of directors undertake such steps as may be necessary to permit written consent by shareholders entitled to cast the minimum number of votes that would be necessary to authorize the action at a meeting at which all shareholders entitled to vote thereon were present and voting. This written consent is to be consistent with applicable law and consistent with giving shareholders the fullest power to act by written consent consistent with applicable law. This includes shareholder ability to initiate any valid topic for written consent.

This proposal topic won majority shareholder support at 13 major companies in a single year. This included 67%-support at both Allstate and Sprint. Hundreds of major companies enable shareholder action by written consent. This proposal topic would have received a vote still higher than 67% at Allstate and Sprint if most Allstate and Sprint shareholders had access to independent proxy voting advice.

Our higher 25%-threshold for shareholders to call a special meeting (which may be unreachable due to time constraints and detailed technical requirements) is one more reason that we should have the right to act by written consent.

The shareholder ability to elect a director by written consent would give our directors a greater incentive to oversee the following problems more effectively and prevent a reoccurrence:

Federal probe into alleged violations of anti-money laundering regulations.
November 2018

Shareholder lawsuit over alleged excessive stock based incentives for executives without proper shareholder disclosure.
October 2018

SEC Inquiry over allegations of misconduct involving internal sharing of privileged information and nepotism.
October 2018

Certified Class Action Lawsuit over allegations of gender discrimination.
October 2018

Certified Class Action Lawsuit over alleged false and misleading statements on collateralized debt obligations sold prior to housing market collapse in 2008.
August 2018

NGO criticism over alleged funding of First Pacific and Salim Group's palm oil production unit facing deforestation allegations, labor rights violations and child labor practices allegations, Indonesia.
July 2018

Investigation over alleged dividend stripping as tax avoidance scheme, Germany.
July 2018

Announcement of share repurchase authorization of up to $5 Billion. Stock buybacks can be a sign of short-termism for executives - sometimes boosting share price without boosting the underlying value, profitability, or ingenuity of the company.
June 2018

$4.4 Billion impairment charge.
January 2018

The expectation is that, once this proposal is adopted, shareholders would not need to make use of this right of written consent because its mere existence will act as a guardrail to help ensue that our company is better overseen by a more qualified and focused board. Our Directors will want to avoid shareholder action by written consent and will thus have more of an incentive to improve the oversight role of the Board of Directors.

Please vote yes: Right to Act by Written Consent - Proposal 4

DIRECTORS' RECOMMENDATION

OUR BOARD UNANIMOUSLY RECOMMENDS A VOTE AGAINST THE SHAREHOLDER PROPOSAL.

Our Board has re-evaluated the ability of shareholders to act by written consent. Action by written consent as proposed may cause confusion and disruption, as well as promote short-termism or special interests. In light of our Board's commitment to corporate governance best practices – including Board-level engagement with shareholders, we believe that the adoption of this proposal is unnecessary and not in the best interests of our firm or our shareholders.

- **Our Board is committed to engaging with our shareholders and listening to their perspectives.** In addition to various governance practices which enhance the rights of all shareholders, our Board has open lines of communication with our shareholders.
  - For example, during 2018 members of our Board, including our Lead Director, met with shareholders representing approximately 30% of our shares outstanding on topics such as board composition and director succession planning, compensation, executive succession planning, regulation and reputational risk.
- **In addition to the right to call a special meeting and extensive shareholder outreach, we maintain several other strong governance practices that protect the rights of all shareholders.** For example:
  - Independent Lead Director with expansive duties.
  - Experienced and diverse Board, which held 63 Board and Committee meetings during 2018.
  - Proactively adopted proxy access provisions.
  - Single class shareholder structure; no supermajority vote requirements.
  - Annual elections of directors; majority voting with resignation policy for directors in uncontested elections.
  - No "poison pill."

- **Matters subject to a shareholder vote should be communicated to all shareholders in the context of an annual or special meeting (which may be called by 25% of outstanding shares), with adequate time to consider the matters proposed.**
  - » Our governing documents provide protections, such as advance notice and thorough disclosure to all shareholders, for the conduct of business at annual and special meetings, to ensure a well-informed, fair and equitable process.
  - » Annual and special meetings also allow opportunity for discussion and interaction among shareholders so that all points of view may be considered prior to a vote.
  - » In contrast, enabling a limited group of shareholders to act by written consent may deprive almost half of our shareholders of these important rights.
- **Action by written consent as proposed may cause confusion and disruption, as well as promote short-termism or special-interests.** For example:
  - » Our Board may be denied the opportunity to consider the merits of a proposed action and to suggest alternative proposals for shareholder evaluation that may be in the best interests of our shareholders.
  - » Multiple shareholder groups may solicit multiple written consents simultaneously, some of which may be duplicative or contradictory, causing confusion and disruption to shareholders, the Board and management.

Certain Relationships and Related Transactions

On the recommendation of our independent directors, our Board has in place both a Related Person Transactions Policy and a policy with respect to outside director involvement with financial firms (see *Corporate Governance—Item 1. Election of Directors—Our Directors*) to provide guidelines for the review of certain relationships and transactions involving our directors and executive officers.

Related Person Transactions Policy

Our Board has a written Related Person Transactions Policy regarding the review and approval of transactions between us and "related persons" (directors, executive officers, immediate family members of a director or executive officer, or known 5% shareholders).

Under this policy, transactions that exceed $120,000 in which a related person may have or may be deemed to have a direct or indirect material interest are submitted to our Governance Committee Chair, our Audit Committee Chair or our full Governance Committee for approval, as applicable. Certain transactions, including employment relationships, ordinary course brokerage, investment and other services, payment of certain regulatory filing fees and certain other ordinary course non-preferential transactions, are considered preapproved transactions, and thus do not require specific approval under the policy (although these transactions must be reported to our Governance Committee and may still be submitted for approval if deemed appropriate).

In determining whether to approve a related person transaction, the following factors, among others, are considered:

- Whether the transaction would impair the independence of an independent director;
- Whether the transaction presents a conflict of interest, taking into account the size of the transaction, the financial position of the director or executive officer, the nature of the director's or executive officer's interest in the transaction and the ongoing nature of the transaction;
- Whether the transaction is fair and reasonable to us and on substantially the same terms as would apply to comparable third parties;
- The business reasons for the transaction;
- Any reputational issues; and
- Whether the transaction is material, taking into account the significance of the transaction to our investors.

Certain Relationships and Transactions

BROKERAGE AND BANKING SERVICES

Some of our directors and executive officers (and persons or entities affiliated with them) have brokerage and/or discretionary accounts at our broker-dealer affiliates, and, in certain cases, extensions of credit not involving more than the normal risk of collectability or presenting other unfavorable features have been and may be made to family members of directors by Goldman Sachs Bank USA in the ordinary course of business on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with persons unrelated to our firm.

FIRM-MANAGED FUNDS AND OTHER INVESTMENTS

We have established private investment funds (Employee Funds) to permit our employees (and in certain cases, retired employees) to participate in our private equity, hedge fund and other similar activities by investing in or alongside funds and investments that we manage or sponsor for independent investors and/or for our firm. Investment decisions for the Employee Funds are made by the investment teams or committees that are fiduciaries for such funds, and no executive officers are members of such investment teams or committees. The Employee Funds generally maintain diversified investment portfolios, and these investment opportunities do not affect the incentives of our executive officers under our compensation program. Many of our employees, their spouses, related charitable foundations or entities they own or control have invested in these Employee Funds. In some cases, we have limited participation to our PMDs, including our executive officers, and in some cases participation may be limited to individuals eligible to invest pursuant to applicable law.

Certain of the Employee Funds provide investors with an interest in the overrides we receive for managing the funds for independent investors (overrides). Employee Funds generally do not require our current or retired PMDs and other current or retired employees to pay management fees and do not deduct overrides from fund distributions. Similarly, certain other investments may be made available to our PMDs, retired PMDs and other current employees on a fee-free or reduced fee basis.

Distributions and redemptions exceeding $120,000 from Employee Funds made to our 2018 executive officers (or persons or certain entities affiliated with them) and Mr. Viniar (with respect to investments made when he was an employee) during 2018, consisting of profits and other income and return of amounts initially invested (excluding overrides generally available only to PMDs, which are discussed below), were approximately, in the aggregate, as follows: Mr. Solomon—$7.1 million; Mr. Blankfein—$15.3 million; Mr. Waldron—$1.4 million; Mr. Scherr—$0.9 million; Mr. Chavez—$0.1 million; Mr. Gnodde—$14.9 million; Mr. O'Neill—$5.4 million; Harvey M. Schwartz (retired April 2018)—$0.7 million; Pablo J. Salame (retired June 2018)—$0.8 million; Gregory K. Palm (General Counsel through 2018)—$19.4 million; Sarah E. Smith (Global Head of Compliance)—$0.3 million; John F.W. Rogers (Chief of Staff and Secretary to the Board)—$2.4 million; and Mr. Viniar—$3.6 million.

Distributions of overrides generally available only to PMDs (and retired PMDs) made to our 2018 executive officers (or persons or entities affiliated with them) and Mr. Viniar (with respect to investments made when he was an employee) during 2018 were approximately, in the aggregate, as follows: Mr. Solomon—$1.32 million; Mr. Blankfein—$1.61 million; Mr. Waldron—$362,000; Mr. Scherr—$167,000; Mr. Chavez—$108,000; Mr. Gnodde—$1.22 million; Mr. Schwartz—$61,000; Mr. Salame—$2,000; Mr. Palm—$1.59 million; Ms. Smith—$59,000; Mr. Rogers—$252,000; and Mr. Viniar—$1.29 million.

Subject to applicable laws, in addition, certain of our directors and executive officers may from time to time invest their personal funds in other funds or investments that we have established and that we manage or sponsor. Except as described above, these other investments are made on substantially the same terms and conditions as other similarly-situated investors in these funds or investments who are neither directors nor employees. In certain of these funds, including certain Employee Funds, our directors and executive officers own in the aggregate more than 10% of the interests in these funds.

Affiliates of Goldman Sachs generally bear overhead and administrative expenses for, and may provide certain other services free of charge to, Employee Funds.

PARTICULAR TRANSACTIONS WITH DIRECTOR-AFFILIATED ENTITIES

We take very seriously any actual or perceived conflict of interest, and critically evaluate all potential transactions and relationships that may involve directors or director-affiliated entities.

Mr. Mittal is the Chairman and CEO of ArcelorMittal S.A. and beneficially owns (directly and indirectly) approximately 37% of the outstanding common shares of ArcelorMittal. Goldman Sachs provides ordinary course financial advisory, lending, investment banking, trading and other financial services to ArcelorMittal and its affiliates, including as described below.

In December 2018 Goldman Sachs agreed to participate in a $5.5 billion five-year revolving credit facility for ArcelorMittal, which facility refinanced prior revolving credit facilities for ArcelorMittal outstanding in the same total amount. Under this $5.5 billion facility, Goldman Sachs has agreed to lend to ArcelorMittal up to $170 million at an interest rate of Libor + 55 basis points (which rate may vary depending on ArcelorMittal's credit ratings); the facility currently is partially drawn, resulting in an approximately $17.7 million loan from Goldman Sachs to ArcelorMittal under this facility.

Goldman Sachs also participates in a $1 billion five-year asset-backed revolving credit facility for a subsidiary of ArcelorMittal, under which the firm has agreed to lend up to $40 million at an interest rate of Libor + 225 basis points (which rate may vary depending on a fixed charge coverage ratio). Goldman Sachs currently has no loan outstanding under this facility.

Goldman Sachs is acting as advisor to ArcelorMittal in connection with the proposed approximately $7 billion acquisition of an Indian steel company. In connection with this acquisition, in December 2018 Goldman Sachs agreed to participate in 12 month acquisition bridge facilities (each with a 6 month extension option) split across two tranches (one for ArcelorMittal and one for a joint venture) as follows. Under a $4.6 billion bridge facility, Goldman Sachs has agreed to lend to an acquisition joint venture up to approximately $354 million (repayment of which is guaranteed by ArcelorMittal) at an interest rate of Libor + 50 basis points (which rate will increase depending on the bridge facility's time to maturity beginning six months after signing); no loan is currently outstanding under this facility. Under a $2.4 billion bridge facility, Goldman Sachs has agreed to lend to ArcelorMittal up to approximately $181 million at an interest rate of Libor + 50 basis points (which rate will increase depending on the bridge facility's time to maturity beginning six months after signing); this facility currently is partially drawn, resulting in an approximately $76 million loan from Goldman Sachs under this facility.

Goldman Sachs also participates in a $147.5 million credit facility for an entity in which ArcelorMittal is an approximately 31% shareholder, which facility was amended in 2018. Under such facility, Goldman Sachs has agreed to lend up to approximately $22.5 million at an interest rate of Libor + 450 basis points. The facility is currently partially drawn, resulting in an approximately $14.3 million loan from Goldman Sachs outstanding under this facility. Concurrent with the amendment to such facility, in 2018 the firm also acted as an underwriter in an approximately $575 million high yield bond offering for this entity.

Goldman Sachs provided sell-side advisory services to the seller of certain long steel businesses in Brazil; majority control of these businesses was acquired by a subsidiary of ArcelorMittal in 2018 in an approximately $350 million transaction. In addition, in 2019 Goldman Sachs acted as an underwriter for approximately $750 million of debt offerings by ArcelorMittal.

Each of these transactions was conducted on, and all of these services were provided on, an arm's-length basis.

FAMILY MEMBER EMPLOYMENT

Children of certain of our 2018 executive officers and directors were employed by the firm as non-executive employees during 2018 and received compensation (consisting of base salary and incentive compensation) for their most recent annual performance period as follows: a child of each of Messrs. Scherr and Blankfein—less than $150,000; a child of each of Messrs. O'Neill and Viniar—less than $350,000.

In each case, the amount of compensation was determined in accordance with our standard compensation practices applicable to similarly-situated employees.

5% SHAREHOLDERS

For information on transactions involving Goldman Sachs, on the one hand, and Berkshire Hathaway Inc., BlackRock, Inc., State Street Corporation or The Vanguard Group, on the other, see footnotes (a), (b), (c) and (d) under *Beneficial Ownership—Beneficial Owners of More Than Five Percent*.

Beneficial Ownership

Beneficial Ownership of Directors and Executive Officers

The following table contains certain information, as of March 4, 2019, regarding beneficial ownership of Common Stock by each director and each NEO, as well as by all directors, NEOs and other executive officers as a group as of such date. The table below contains information regarding ownership not only of our Common Stock, but also of vested RSUs, where applicable.

NAME	NUMBER OF SHARES OF COMMON STOCK BENEFICIALLY OWNED[a][b]
David Solomon[c]	188,965
John Waldron[c]	117,007
Stephen Scherr[c]	123,722
R. Martin Chavez[c]	141,661
Richard Gnodde[c]	292,123
Timothy O'Neill[c]	231,300
Lloyd Blankfein[c]	2,393,130
Michele Burns	20,253
Drew Faust	1,256
Mark Flaherty	11,219
William George	79,020
James Johnson	47,194
Ellen Kullman	5,390
Lakshmi Mittal	45,260
Adebayo Ogunlesi	21,814
Peter Oppenheimer	16,761
Jan Tighe	242
David Viniar[c]	1,054,029
Mark Winkelman	101,782
All directors, NEOs and other executive officers as a group (23 persons)[d]	5,194,047

(a) For purposes of this table and the Beneficial Owners of More than Five Percent table below, "beneficial ownership" is determined in accordance with Rule 13d-3 under the Exchange Act, pursuant to which a person or group of persons is deemed to have "beneficial ownership" of any shares of Common Stock that such person has the right to acquire within 60 days of the date of determination. In light of the nature of vested RSUs, we have also included in this table shares of Common Stock underlying vested RSUs. For purposes of computing the percentage of outstanding shares of Common Stock held by each person or group of persons named above, any shares that such person or persons has the right to acquire within 60 days (as well as the shares of Common Stock underlying vested RSUs) are deemed to be outstanding but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person.

The shares of Common Stock underlying vested RSUs included in the table above are as follows:

NAME	RSUS
David Solomon[c]	14,045
John Waldron[c]	12,532
Stephen Scherr[c]	11,668
R. Martin Chavez[c]	67,529
Richard Gnodde[c]	150,114
Timothy O'Neill [c]	69,362
Lloyd Blankfein[c]	71,551
Michele Burns	20,253
Drew Faust	1,256
Mark Flaherty	10,202
William George	49,390
James Johnson	47,194
Ellen Kullman	5,390
Lakshmi Mittal	30,260
Adebayo Ogunlesi	19,814
Peter Oppenheimer	14,761
Jan Tighe	242
David Viniar[c]	15,561
Mark Winkelman	11,782
All directors, NEOs and other executive officers as a group (23 persons)[d]	723,769

(b) Except as discussed in footnotes (c) and (d) below, all of our directors, NEOs and other executive officers have sole voting power and sole dispositive power over all shares of Common Stock beneficially owned by them. No individual director, NEO or other executive officer beneficially owned in excess of 1% of the outstanding Common Stock as of March 4, 2019. The group consisting of all directors, NEOs and other executive officers as of March 4, 2019 beneficially owned approximately 1.41% of the outstanding shares of Common Stock (1.22% not including vested RSUs) as of such date.

(c) Excludes any shares of Common Stock subject to our Shareholders' Agreement that are owned by other parties to our Shareholders' Agreement. As of March 4, 2019, each of Messrs. Solomon, Waldron and Scherr was a party to our Shareholders' Agreement and a member of our Shareholders' Committee; however, each disclaims beneficial ownership of the shares of Common Stock subject to our Shareholders' Agreement, other than those specified above for each NEO individually. See *Frequently Asked Questions—How is voting affected by shareholders who participate in certain Goldman Sachs Partner Compensation plans?* for a discussion of our Shareholders' Agreement.

Includes shares of Common Stock beneficially owned by our NEOs indirectly through certain estate planning vehicles of our NEOs for which voting power and dispositive power is shared, through family trusts, the sole beneficiaries of which are immediate family members of our NEOs, and through private charitable foundations of which our NEOs are trustees, as follows: Mr. Solomon—17,497 shares, Mr. Gnodde—142,009 shares, Mr. O'Neill—9,667 shares and Mr. Blankfein—484,281 shares; similarly, with respect to Mr. Viniar—327,543 shares. Each NEO or Mr. Viniar, as applicable, shares voting power and dispositive power over these shares and disclaims beneficial ownership of the shares held in family trusts and private charitable foundations.

All RSUs held by Mr. Viniar were received as compensation for his service as a non-employee director.

(d) Includes an aggregate of 123,186 shares of Common Stock beneficially owned by these individuals indirectly through certain estate planning vehicles for which voting power and dispositive power is shared, an aggregate of 795,130 shares of Common Stock beneficially owned by family trusts, the sole beneficiaries of which are immediate family members of these individuals and an aggregate of 137,324 shares of Common Stock beneficially owned by the private charitable foundations of which certain of these individuals are trustees. Each of these individuals shares voting power and dispositive power over these shares and disclaims beneficial ownership of the shares held in family trusts and private charitable foundations.

Each current executive officer is a party to our Shareholders' Agreement and disclaims beneficial ownership of the shares of Common Stock subject to our Shareholders' Agreement that are owned by other parties to our Shareholders' Agreement.

See *Compensation Matters—Compensation Discussion and Analysis—Other Compensation Policies and Practices* for a discussion of our executive stock ownership guidelines and retention requirements.

Beneficial Owners of More Than Five Percent

Based on filings made under Section 13(d) and Section 13(g) of the Exchange Act, as of March 4, 2019, the only persons known by us to be beneficial owners of more than 5% of Common Stock were as follows:

NAME AND ADDRESS OF BENEFICIAL OWNER	NUMBER OF SHARES OF COMMON STOCK BENEFICIALLY OWNED	PERCENT OF CLASS (%)
Berkshire Hathaway Inc. 3555 Farnam Street Omaha, Nebraska 68131	18,784,698[a]	5.12
BlackRock, Inc. 55 East 52nd Street New York, New York 10022	22,324,244[b]	6.09
State Street Corporation State Street Financial Center One Lincoln Street Boston, Massachusetts 02111	21,098,927[c]	5.75
The Vanguard Group 100 Vanguard Blvd. Malvern, Pennsylvania 19355	24,938,587[d]	6.80

(a) This information has been derived from the Schedule 13G filed with the SEC on February 14, 2019 by Warren E. Buffett, Berkshire Hathaway Inc. and certain other reporting persons of which none beneficially owns more than 5% of our Common Stock. We and our affiliates provide ordinary course financial advisory, lending, investment banking and other financial services to Berkshire Hathaway Inc. and its affiliates and related entities. These transactions are negotiated on arm's-length bases and contain customary terms and conditions.

(b) This information has been derived from the Schedule 13G filed with the SEC on February 5, 2013, Amendment No. 1 to such filing filed with the SEC on February 4, 2014, Amendment No. 2 to such filing filed with the SEC on February 9, 2015, Amendment No. 3 to such filing filed with the SEC on February 10, 2016, Amendment No. 4 to such filing filed with the SEC on January 24, 2017, Amendment No. 5 to such filing filed with the SEC on January 25, 2018 and Amendment No. 6 to such filing filed with the SEC on February 4, 2019 by BlackRock, Inc. and certain subsidiaries. We and our affiliates engage in ordinary course trading, brokerage, asset management or other transactions or arrangements with, and provide ordinary course investment banking, lending or other financial services to, BlackRock, Inc. and its affiliates, related entities and clients. These transactions are negotiated on arm's-length bases and contain customary terms and conditions. Affiliates of BlackRock, Inc. are investment managers for certain investment options under our 401(k) Plan and certain GS Pension Plan assets. BlackRock's affiliates' engagement is unrelated to BlackRock's Common Stock ownership. In addition, their fees resulted from arm's-length negotiations, and we believe they are reasonable in amount and reflect market terms and conditions.

(c) This information has been derived from the Schedule 13G filed with the SEC on February 14, 2019 by State Street Corporation and certain subsidiaries. We and our affiliates provide ordinary course financial advisory, lending, investment banking and other financial services to, and engage in ordinary course trading, brokerage, asset management or other transactions or arrangements with, State Street Corporation and its affiliates, related entities and clients. These transactions are negotiated on arm's-length bases and contain customary terms and conditions. State Street Bank and Trust Company is trustee and a custodian for each of our 401(k) Plan and the GS Pension Plan. State Street Global Advisors is an investment manager for certain investment options under our 401(k) Plan and previously certain assets in the GS Pension Plan. State Street Bank and Trust Company's and State Street Global Advisors' engagements are unrelated to State Street's Common Stock ownership. Their fees resulted from arm's-length negotiations, and we believe they are reasonable in amount and reflect market terms and conditions.

(d) This information has been derived from the Schedule 13G filed with the SEC on February 10, 2016, Amendment No. 1 to such filing filed with the SEC on February 13, 2017, Amendment No. 2 to such filing filed with the SEC on February 9, 2018 and Amendment No. 3 to such filing filed with the SEC on February 11, 2019 by The Vanguard Group and certain subsidiaries. We and our affiliates engage in ordinary course trading, arrangements relating to the placement of the firm's investment funds, or other transactions or arrangements with, and may from time to time provide other ordinary course investment banking or other financial services to, The Vanguard Group and its affiliates, related entities and clients. These transactions are negotiated on arm's-length bases and contain customary terms and conditions. The Vanguard Group is an investment manager to mutual funds that are investment options in our 401(k) Plan and certain tax qualified plans maintained by certain of our affiliates. The selection of the Vanguard mutual funds as investment options for each plan is unrelated to Vanguard's Common Stock ownership. In the case of The 401(k) Savings Plan, a third-party investment manager who is not affiliated with GS is responsible for fund selection and selected the Vanguard mutual fund. We believe that the fees paid to The Vanguard Group through the Vanguard mutual fund are the same as the fees that are paid by the other holders of the same share class of that fund.

Additional Information

How to Contact Us

Across our shareholder base there is a wide variety of viewpoints about matters affecting our firm. We meet and speak with our shareholders throughout the year. Board-level engagement is led by our Lead Director, and may include other directors as appropriate.

OUR DIRECTORS

Communicate with our directors, including our Lead Director, Committee Chairs or Independent Directors as a group

Mail correspondence to:
John F.W. Rogers
Secretary to the Board of Directors
The Goldman Sachs Group, Inc.
200 West Street
New York, NY 10282

INVESTOR RELATIONS

Reach out to our Investor Relations team at any time

Email:
gs-investor-relations@gs.com

Phone:
(+1) 212-902-0300

BUSINESS INTEGRITY PROGRAM

You may contact us, or any member of our Board upon request, in each case in a confidential or anonymous manner, through the firm's reporting hotline under our Policy on Reporting of Concerns Regarding Accounting and Other Matters

Phone:
(+1) 866-520-4056

Policy is available on our website at
www.gs.com/business-integrity-program

Corporate Governance Materials Available on our Website

On our website (www.gs.com/shareholders) under the heading "Corporate Governance," you can find, among other things, our:

- Restated Certificate of Incorporation
- Amended and Restated By-Laws
- Corporate Governance Guidelines
- Code of Business Conduct and Ethics
- Policy Regarding Director Independence Determinations
- Charters of our Audit, Compensation, Governance, Public Responsibilities and Risk Committees
- Compensation Principles
- Statement on Policy Engagement and Political Participation
- Information about our Business Integrity Program, including our Policy on Reporting of Concerns Regarding Accounting and Other Matters
- Environmental, Social and Governance Report and Environmental Policy Framework
- Report on Vesting of Equity-Based Awards Due to Voluntary Resignation to Enter Government Service
- Statement on Human Rights and Statement on Modern Slavery and Human Trafficking
- Business Principles
- Business Standards Committee Report and Business Standards Committee: Impact Report

Information on our website is not, and will not be deemed to be, a part of this Proxy Statement or incorporated into any of our other filings with the SEC.

Compensation-Related Litigation

The following description is as of March 4, 2019:

On May 9, 2017, Goldman Sachs and certain of its current and former directors were named as defendants in an action brought by a shareholder in the Court of Chancery of the State of Delaware. The complaint, which asserts derivative claims purportedly on behalf of Goldman Sachs and direct claims on behalf of the shareholder-plaintiff, alleges, among other things, that the director defendants breached their fiduciary duties by approving excessive non-employee director compensation since 2015, including because such compensation is the highest among the firm's U.S. Peers. A copy of the plaintiff's complaint is available at http://www.goldmansachs.com/litigation/2017nedderivative.pdf. Defendants moved to dismiss on July 28, 2017. On March 20, 2018, the parties entered into a settlement-in-principle, which, following an objection from a stockholder, the court declined to approve. Oral argument on defendants' motion to dismiss and the objector's fee motion was held on February 4, 2019.

Compensation Committee Interlocks and Insider Participation

No member of our Compensation Committee is or has been an officer or employee of Goldman Sachs. No member of our Compensation Committee is an executive officer of another entity at which one of our executive officers serves on the board of directors. For information about related person transactions involving members of our Compensation Committee, see *Certain Relationships and Related Transactions*.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our directors and executive officers and persons who own more than 10% of a registered class of our equity securities to file reports of ownership of, and transactions in, our equity securities with the SEC. Our directors and executive officers are also required to furnish us with copies of all such Section 16(a) reports they file. The reports are published on our website at www.gs.com/shareholders.

Based on a review of the copies of these reports, and on written representations from our reporting persons, we believe that all such Section 16(a) filing requirements applicable to our directors and executive officers were complied with during 2018.

Incorporation by Reference

Only the following sections of this Proxy Statement shall be deemed incorporated by reference into our 2018 Annual Report on Form 10-K in response to Part III, Items 10, 11, 12, 13 and 14 thereof: Corporate Governance—Item 1. Election of Directors—Our Directors, Corporate Governance—Item 1. Election of Directors—Independence of Directors, Corporate Governance—Structure of our Board and Governance Practices—Our Board Committees—Audit, Compensation Matters—Compensation Discussion and Analysis, Compensation Matters—Executive Compensation, Compensation Matters—Report of our Compensation Committee, Compensation Matters—Pay Ratio Disclosure, Compensation Matters—Non-Employee Director Compensation Program, Audit Matters—Item 3. Ratification of PwC as our Independent Registered Public Accounting Firm for 2019, Certain Relationships and Related Transactions, Beneficial Ownership, Additional Information—Compensation Committee Interlocks and Insider Participation, Additional Information—Section 16(a) Beneficial Ownership Reporting Compliance, Frequently Asked Questions—How do I obtain more information about Goldman Sachs? and Frequently Asked Questions—How can I submit nominees (such as through proxy access) or shareholder proposals in accordance with our By-Laws?

To the extent that this Proxy Statement is incorporated by reference into any other filing by Goldman Sachs under either the U.S. Securities Act of 1933, as amended, or the Exchange Act, the sections of this Proxy Statement entitled "Report of our Compensation Committee" and "Report of our Audit Committee" (to the extent permitted by the rules of the SEC) and the court documents to which we refer under —*Compensation-Related Litigation*, will not be deemed incorporated into any such filing, unless specifically provided otherwise in such filing.

Other Business

As of the date hereof, there are no other matters that our Board intends to present, or has reason to believe others will present, at our Annual Meeting. If other matters come before our Annual Meeting, the persons named in the accompanying form of proxy will vote in accordance with their best judgment with respect to such matters.

Frequently Asked Questions

What are some common terms and acronyms used in this Proxy Statement?

ANNUAL MEETING	Goldman Sachs Annual Meeting of Shareholders to be held on May 2, 2019
BVPS	Book Value Per Common Share
BY-LAWS	Amended and Restated By-Laws
CD&A	Compensation Discussion and Analysis
COMMON STOCK	Common shares of The Goldman Sachs Group, Inc.
COMPENSATION RATIO	Ratio of firmwide compensation and benefits expense to net revenues
CRO	Chief Risk Officer
EPS	Diluted Earnings Per Common Share
ESG	Environmental, social and governance
EUROPEAN PEERS	Barclays PLC (BARC), Credit Suisse Group AG (CS), Deutsche Bank AG (DB) and UBS Group AG (UBS)
EXCHANGE ACT	U.S. Securities Exchange Act of 1934, as amended
EXECUTIVE LEADERSHIP TEAM	Our CEO, COO and CFO
FICC	Fixed Income, Currency and Commodities
GOLDMAN SACHS, OUR FIRM, WE, US, GS AND OUR	The Goldman Sachs Group, Inc., a Delaware corporation, and its consolidated subsidiaries
GOVERNANCE COMMITTEE	Corporate Governance and Nominating Committee
GS GIVES	Goldman Sachs Gives
HCM	Human Capital Management
IR	Investor Relations
LTIP	Long-Term Performance Incentive Plan
NEO	Named Executive Officer. For 2018, our NEOs are: David Solomon, John Waldron, Stephen Scherr, R. Martin Chavez, Richard Gnodde, Timothy O'Neill and Lloyd Blankfein
NYSE	New York Stock Exchange
PMD	Participating Managing Director
PROXY STATEMENT	Goldman Sachs Proxy Statement filed with the SEC in connection with the 2019 Annual Meeting
PSU	Performance-based RSU
PWC	PricewaterhouseCoopers LLP
ROE	Return on Average Common Shareholders' Equity (for information regarding the use of the term "ROE" in connection with certain compensation-related calculations, see page 51)
RSU	Restricted stock unit
SARBANES-OXLEY CLAWBACK	Clawback for restatement of financials due to misconduct (for more detail, see page 53-54)
SAY ON PAY VOTE	Our annual advisory vote to approve NEO compensation
SEC	U.S. Securities and Exchange Commission
U.S. PEERS	Bank of America Corporation (BAC), Citigroup Inc. (C), JPMorgan Chase & Co. (JPM) and Morgan Stanley (MS)
U.S. TAX LEGISLATION	The Tax Cuts and Jobs Act enacted in the U.S. on December 22, 2017

When and where is our Annual Meeting?

We will hold our Annual Meeting on Thursday, May 2, 2019, at 8:30 a.m., local time, at our offices at 30 Hudson Street, Jersey City, New Jersey 07302.

Will our Annual Meeting be webcast?

Our Annual Meeting will also be available through a live, audio-only webcast. Information about the webcast can be found on our website at www.gs.com/proxymaterials.

What is included in our proxy materials?

Our proxy materials, which are available on our website at www.gs.com/proxymaterials, include:

- Our Notice of 2019 Annual Meeting of Shareholders;
- Our Proxy Statement; and
- Our 2018 Annual Report to Shareholders.

If you received printed versions of these materials by mail (rather than through electronic delivery), these materials also included a proxy card or voting instruction form.

How are we distributing our proxy materials?

To expedite delivery, reduce our costs and decrease the environmental impact of our proxy materials, we used "Notice and Access" in accordance with an SEC rule that permits us to provide proxy materials to our shareholders over the Internet. By March 22, 2019, we sent a Notice of Internet Availability of Proxy Materials to certain of our shareholders containing instructions on how to access our proxy materials online. If you received a Notice, you will not receive a printed copy of the proxy materials in the mail. Instead, the Notice instructs you on how to access and review all of the important information contained in the proxy materials. The Notice also instructs you on how you may submit your proxy via the Internet. If you received a Notice and would like to receive a copy of our proxy materials, follow the instructions contained in the Notice to request a copy electronically or in paper form on a one-time or ongoing basis. Shareholders who do not receive the Notice will continue to receive either a paper or electronic copy of our Proxy Statement and 2018 Annual Report to Shareholders, which will be sent on or about March 26, 2019.

Who can vote at our Annual Meeting?

You can vote your shares of Common Stock at our Annual Meeting if you were a shareholder at the close of business on March 4, 2019, the record date for our Annual Meeting.

As of March 4, 2019, there were 366,763,123 shares of Common Stock outstanding, each of which entitles the holder to one vote for each matter to be voted on at our Annual Meeting.

What is the difference between holding shares as a shareholder of record and as a beneficial owner of shares held in street name?

Shareholder of Record. If your shares of Common Stock are registered directly in your name with our transfer agent, Computershare, you are considered a "shareholder of record" of those shares. You may contact our transfer agent (by regular mail or phone) at:

Computershare
P.O. Box 505000
Louisville, KY 40233-5000
U.S. and Canada: 1-800-419-2595
International: 1-201-680-6541
www.computershare.com

Beneficial Owner of Shares Held in Street Name. If your shares are held in an account at a bank, brokerage firm, broker-dealer or other similar organization, then you are a beneficial owner of shares held in street name. In that case, you will have received these proxy materials from the bank, brokerage firm, broker-dealer or other similar organization holding your account and, as a beneficial owner, you have the right to direct your bank, brokerage firm or similar organization as to how to vote the shares held in your account.

Can I attend our Annual Meeting?

Shareholders as of the record date and/or their authorized representatives are permitted to attend our Annual Meeting in person by following the procedures in our Proxy Statement. Our Annual Meeting is handicap accessible, and hearing devices are available upon request.

What do I need to bring to attend the Annual Meeting?

Photo Identification. Anyone wishing to gain admission to our Annual Meeting must provide a form of government-issued photo identification, such as a driver's license or passport.

Proof of Ownership

- **Shareholders of Record**: No additional document regarding proof of ownership is required.
- **Beneficial Owner of Shares Held in Street Name**: You or your representative must bring an account statement, voting instruction form or legal proxy as proof of your ownership of shares as of the close of business on March 4, 2019.

Additional Documentation for an Authorized Representative. Any shareholder representative (for example, of an entity that is a shareholder) must also present satisfactory documentation evidencing his or her authority with respect to the shares.

We reserve the right to limit the number of representatives for any shareholder who may attend the meeting.

Failure to follow these procedures may delay your entry into or prevent you from being admitted to our Annual Meeting. Please contact Beverly O'Toole at 1-212-357-1584 or Beverly.OToole@gs.com at least five business days in advance of our Annual Meeting if you would like to confirm you have proper documentation or if you have other questions about attending our Annual Meeting.

How do I vote?

To be valid, your vote by Internet, telephone or mail must be received by the deadline specified on the proxy card or voting information form, as applicable.

	IF YOU ARE A SHAREHOLDER OF RECORD	IF YOU ARE A BENEFICIAL OWNER OF SHARES HELD IN STREET NAME
By Internet* (24 hours a day)	www.proxyvote.com	www.proxyvote.com
By Telephone* (24 hours a day)	1-800-690-6903	1-800-454-8683
By Mail	Return a properly executed and dated proxy card in the pre-paid envelope we have provided	Return a properly executed and dated voting instruction form by mail, depending upon the method(s) your bank, brokerage firm, broker-dealer or other similar organization makes available
In Person at our Annual Meeting	Instructions on attending our Annual Meeting in person can be found above	To do so, you will need to bring a valid "legal proxy." You can obtain a legal proxy by contacting your account representative at the bank, brokerage firm, broker-dealer or other similar organization through which you hold your shares. Additional instructions on attending our Annual Meeting in person can be found above

*Internet and telephone voting procedures are designed to authenticate shareholders' identities, allow shareholders to give their voting instructions and confirm that shareholders' instructions have been recorded properly. We have been advised that the Internet and telephone voting procedures that have been made available to you are consistent with applicable legal requirements. Shareholders voting by Internet or telephone should understand that, while we and Broadridge Financial Solutions, Inc. (Broadridge) do not charge any fees for voting by Internet or telephone, there may still be costs, such as usage charges from Internet access providers and telephone companies, for which you are responsible.

Can I change my vote after I have voted?

You can revoke your proxy at any time before it is voted at our Annual Meeting, subject to the voting deadlines that are described on the proxy card or voting instruction form, as applicable.

You can revoke your vote:

- By voting again by Internet or by telephone (only your last Internet or telephone proxy submitted prior to the meeting will be counted);
- By signing and returning a new proxy card with a later date;
- By obtaining a "legal proxy" from your account representative at the bank, brokerage firm, broker dealer or other similar organization through which you hold shares; or
- By attending our Annual Meeting and voting in person.

You may also revoke your proxy by giving written notice of revocation to John F.W. Rogers, Secretary to the Board of Directors, at The Goldman Sachs Group, Inc., 200 West Street, New York, New York 10282, which must be received no later than 5:00 p.m., Eastern Time, on May 1, 2019.

If your shares are held in street name, we also recommend that you contact your broker, bank or other nominee for instructions on how to change or revoke your vote.

Can I confirm that my vote was cast in accordance with my instructions?

Shareholder of Record. Our shareholders have the opportunity to confirm that their vote was cast in accordance with their instructions. Vote confirmation is consistent with our commitment to sound corporate governance practices and a key means to increase transparency. Vote confirmation is available 24 hours after your vote is received beginning on April 17, 2019, with the final vote tabulation available through July 2, 2019. You may confirm your vote whether it was cast by proxy card, electronically or telephonically. To obtain vote confirmation, log onto www.proxyvote.com using the control number we have provided to you and receive confirmation on how your vote was cast.

Beneficial Owner of Shares Held in Street Name. If your shares are held in an account at a bank, brokerage firm, broker-dealer or other similar organization, the ability to confirm your vote may be affected by the rules and procedures of your bank, brokerage firm, broker-dealer or other similar organization and the confirmation will not confirm whether your bank or broker allocated the correct number of shares to you.

How can I obtain an additional proxy card?

Shareholders of record can contact our Investor Relations team at The Goldman Sachs Group, Inc., 200 West Street, 29th Floor, New York, New York 10282, Attn: Investor Relations, telephone: 1-212-902-0300, email: gs-investor-relations@gs.com.

If you hold your shares of Common Stock in street name, contact your account representative at the bank, brokerage firm, broker-dealer or other similar organization through which you hold your shares.

How will my shares be voted if I do not vote in person at the Annual Meeting?

The proxy holders (that is, the persons named as proxies on the proxy card) will vote your shares of Common Stock in accordance with your instructions at the Annual Meeting (including any adjournments or postponements thereof).

How will my shares be voted if I do not give specific voting instructions?

Shareholders of Record. If you indicate that you wish to vote as recommended by our Board or if you sign, date and return a proxy card but do not give specific voting instructions, then the proxy holders will vote your shares in the manner recommended by our Board on all matters presented in this Proxy Statement, and the proxy holders may determine in their discretion regarding any other matters properly presented for a vote at our Annual Meeting. Although our Board does not anticipate that any of the director nominees will be unable to stand for election as a director nominee at our Annual Meeting, if this occurs, proxies will be voted in favor of such other person or persons as may be recommended by our Governance Committee and designated by our Board.

Beneficial Owners of Shares Held in Street Name. If your bank, brokerage firm, broker-dealer or other similar organization does not receive specific voting instructions from you, how your shares may be voted will depend on the type of proposal.

- **Ratification of Independent Registered Public Accounting Firm**. For the ratification of the appointment of independent registered public accounting firm, NYSE rules provide that brokers (other than brokers that are affiliated with Goldman Sachs) that have not received voting instructions from their customers 10 days before the meeting date may vote their customers' shares in the brokers' discretion on the ratification of independent registered public accounting firm. This is known as broker-discretionary voting.
  - » If your broker is Goldman Sachs & Co. LLC or another affiliate of ours, NYSE policy specifies that, in the absence of your specific voting instructions, your shares of Common Stock may only be voted in the same proportion as other shares are voted with respect to the proposal.
  - » For shares of Common Stock held in retail accounts at Goldman Sachs & Co. LLC for which specific voting instructions are not received, we will vote such shares in proportion to the voted shares of Common Stock in retail accounts at Goldman Sachs & Co. LLC.
- **All other matters**. All other proposals are "non-discretionary matters" under NYSE rules, which means your bank, brokerage firm, broker-dealer or other similar organization may not vote your shares without voting instructions from you. Therefore, you must give your broker instructions in order for your vote to be counted.

Participants in our 401(k) Plan. If you sign and return the voting instruction form but otherwise leave it blank or if you do not otherwise provide voting instructions to the 401(k) Plan trustee by mail, Internet or telephone, your shares will be voted in the same proportion as the shares held under the 401(k) Plan for which instructions are received, unless otherwise required by law.

What is a Broker Non-Vote?

A "broker non-vote" occurs when your broker submits a proxy for the meeting with respect to the ratification of the appointment of independent registered public accounting firm but does not vote on non-discretionary matters because you did not provide voting instructions on these matters.

What is the quorum requirement for our Annual Meeting?

A quorum is required to transact business at our Annual Meeting. The holders of a majority of the outstanding shares of Common Stock as of March 4, 2019, present in person or represented by proxy and entitled to vote, will constitute a quorum. Abstentions and broker non-votes are treated as present for quorum purposes.

If I abstain, what happens to my vote?

If you choose to abstain from voting on the Election of Directors, your abstention will have no effect, as the required vote is calculated through the following calculation: votes FOR divided by the sum of votes FOR plus votes AGAINST.

If you choose to abstain from voting on any other matter at our Annual Meeting, your abstention will be counted as a vote AGAINST the proposal, as the required vote is calculated through the following calculation: votes FOR divided by the sum of votes FOR plus votes AGAINST plus votes ABSTAINING.

What vote is required for adoption or approval of each matter to be voted on?

PROPOSAL	VOTE REQUIRED	DIRECTORS' RECOMMENDATION
Election of Directors	Majority of the votes cast FOR or AGAINST (for each director nominee)	FOR all nominees Unless a contrary choice is specified, proxies solicited by our Board will be voted FOR the election of our director nominees
Advisory Vote to Approve Executive Compensation (Say on Pay)	Majority of the shares present in person or represented by proxy	FOR the resolution approving the Executive Compensation of our NEOs Unless a contrary choice is specified, proxies solicited by our Board will be voted FOR the resolution
Ratification of PwC as our Independent Registered Public Accounting Firm for 2019	Majority of the shares present in person or represented by proxy	FOR the ratification of the appointment of PwC Unless a contrary choice is specified, proxies solicited by our Board will be voted FOR the ratification of the appointment
Shareholder Proposal	Majority of the shares present in person or represented by proxy	AGAINST the shareholder proposal Unless a contrary choice is specified, proxies solicited by our Board will be voted AGAINST the shareholder proposal

What are my choices for casting my vote on each matter to be voted on?

PROPOSAL	VOTING OPTIONS	EFFECT OF ABSTENTIONS	BROKER DISCRETIONARY VOTING ALLOWED?	EFFECT OF BROKER NON-VOTES
Election of Directors	FOR, AGAINST or ABSTAIN (for each director nominee)	No effect - not counted as a "vote cast"	No	No effect
Advisory Vote to Approve Executive Compensation (Say on Pay)	FOR, AGAINST or ABSTAIN	Treated as a vote AGAINST the proposal	No	No effect
Ratification of PwC as our Independent Registered Public Accounting Firm for 2019	FOR, AGAINST or ABSTAIN	Treated as a vote AGAINST the proposal	Yes	Not applicable
Shareholder Proposal	FOR, AGAINST or ABSTAIN	Treated as a vote AGAINST the proposal	No	No effect

Who counts the votes cast at our Annual Meeting?

Representatives of Broadridge will tabulate the votes cast at our Annual Meeting, and American Election Services, LLC will act as the independent inspector of election.

How is voting affected by shareholders who participate in certain Goldman Sachs Partner Compensation plans?

Employees of Goldman Sachs who participate in the PCP are "covered persons" under our Shareholders' Agreement. Our Shareholders' Agreement governs, among other things, the voting of shares of Common Stock owned by each covered person directly or jointly with a spouse (but excluding shares acquired under our 401(k) Plan). Shares of Common Stock subject to our Shareholders' Agreement are called "voting shares."

Our Shareholders' Agreement requires that before any of our shareholders vote, a separate, preliminary vote is held by the persons covered by our Shareholders' Agreement. In the election of directors, all voting shares will be voted in favor of the election of the director nominees receiving the highest numbers of votes cast by the covered persons in the preliminary vote. For all other matters, all voting shares will be voted in accordance with the majority of the votes cast by the covered persons in the preliminary vote.

If you are a party to our Shareholders' Agreement, you previously gave an irrevocable proxy to our Shareholders' Committee to vote your voting shares at our Annual Meeting in accordance with the preliminary vote, and to vote on any other matters that may come before our Annual Meeting as the proxy holder sees fit in a manner that is not inconsistent with the preliminary vote and that does not frustrate the intent of the preliminary vote.

As of March 4, 2019, 13,949,461 shares of Common Stock were beneficially owned by the parties to the Shareholders' Agreement. Each person who is a party to our Shareholders' Agreement disclaims beneficial ownership of the shares subject to the agreement that are owned by any other party. As of March 4, 2019, 12,881,809 of the outstanding shares of Common Stock that were held by parties to our Shareholders' Agreement were subject to the voting provisions of our Shareholders' Agreement (representing approximately 3.51% of the outstanding shares entitled to vote at our Annual Meeting). The preliminary vote with respect to the voting shares will be concluded on or about April 19, 2019.

Other than this Shareholders' Agreement (which covers our Chairman and CEO, who is also a director), there are no voting agreements by or among any of our directors.

Where can I find the voting results of our Annual Meeting?

We expect to announce the preliminary voting results at our Annual Meeting. The final voting results will be reported in a Current Report on Form 8-K that will be posted on our website.

When will Goldman Sachs next hold an advisory vote on the frequency of Say on Pay votes?

The next advisory vote on the frequency of Say on Pay votes will be held no later than our 2023 Annual Meeting of Shareholders.

How do I obtain more information about Goldman Sachs?

A copy of our 2018 Annual Report to Shareholders accompanies this Proxy Statement. You also may obtain, free of charge, a copy of that document, our 2018 Annual Report on Form 10-K, our Corporate Governance Guidelines, our Code of Business Conduct and Ethics, our Director Independence Policy and the charters for our Audit, Compensation, Governance, Public Responsibilities and Risk Committees by writing to: The Goldman Sachs Group, Inc., 200 West Street, 29th Floor, New York, New York 10282, Attn: Investor Relations; email: gs-investor-relations@gs.com.

These documents, as well as other information about Goldman Sachs, are also available on our website at www.gs.com/shareholders.

How do I inspect the list of shareholders of record?

A list of the shareholders of record as of March 4, 2019 will be available for inspection during ordinary business hours at our headquarters at 200 West Street, New York, New York 10282, from April 22, 2019 to May 1, 2019, as well as at our Annual Meeting.

How do I sign up for electronic delivery of proxy materials?

This Proxy Statement and our 2018 Annual Report to Shareholders are available on our website at: www.gs.com/proxymaterials. If you would like to help reduce our costs of printing and mailing future materials, you can agree to access these documents in the future over the Internet rather than receiving printed copies in the mail. For your convenience, you may find links to sign up for electronic delivery for both shareholders of record and beneficial owners who hold shares in street name at www.gs.com/electronicdelivery.

Once you sign up, you will continue to receive proxy materials electronically until you revoke this preference.

Who pays the expenses of this proxy solicitation?

Our proxy materials are being used by our Board in connection with the solicitation of proxies for our Annual Meeting. We pay the expenses of the preparation of proxy materials and the solicitation of proxies for our Annual Meeting. In addition to the

solicitation of proxies by mail, certain of our directors, officers or employees may solicit telephonically, electronically or by other means of communication. Our directors, officers and employees will receive no additional compensation for any such solicitation. We have also hired Morrow Sodali LLC, 470 West Avenue, Stamford, Connecticut 06902, to assist in the solicitation and distribution of proxies, for which they will receive a fee of $25,000, as well as reimbursement for certain out-of-pocket costs and expenses. We will reimburse brokers, including Goldman Sachs & Co. LLC, and other similar institutions for costs incurred by them in mailing proxy materials to beneficial owners.

What is "householding"?

In accordance with a notice sent to certain street name shareholders of Common Stock who share a single address, shareholders at a single address will receive only one copy of this Proxy Statement and our 2018 Annual Report to Shareholders unless we have previously received contrary instructions. This practice, known as "householding," is designed to reduce our printing and postage costs. We currently do not "household" for shareholders of record.

If your household received a single set of proxy materials, but you would prefer to receive a separate copy of this Proxy Statement or our 2018 Annual Report to Shareholders, you may contact us at The Goldman Sachs Group, Inc., 200 West Street, 29th Floor, New York, New York 10282, Attn: Investor Relations, telephone: 1-212-902-0300, email: gs-investor-relations@gs.com, and we will deliver those documents to you promptly upon receiving the request.

You may request or discontinue householding in the future by contacting the broker, bank or similar institution through which you hold your shares. You may also change your householding preferences through the Broadridge Householding Election system at 1-866-540-7095 using the control number we have provided to you.

How can I recommend a director candidate to our Governance Committee?

Our Governance Committee welcomes candidates recommended by shareholders and will consider these candidates in the same manner as other candidates.

Shareholders who wish to recommend director candidates for consideration by our Governance Committee may do so by submitting in writing such candidates' names to John F.W. Rogers, Secretary to the Board of Directors, at The Goldman Sachs Group, Inc., 200 West Street, New York, New York 10282.

How can I submit a Rule 14a-8 shareholder proposal at the 2020 Annual Meeting of Shareholders?

Shareholders who, in accordance with the SEC's Rule 14a-8, wish to present proposals for inclusion in the proxy materials to be distributed by us in connection with our 2020 Annual Meeting of Shareholders must submit their proposals to John F.W. Rogers, Secretary to the Board of Directors, via email at shareholderproposals@gs.com or by mail at The Goldman Sachs Group, Inc., 200 West Street, New York, New York 10282. Proposals must be received on or before Saturday, November 23, 2019. As the rules of the SEC make clear, however, simply submitting a proposal does not guarantee its inclusion.

How can I submit nominees (such as through proxy access) or shareholder proposals in accordance with our By-laws?

Shareholders who wish to submit a "proxy access" nomination for inclusion in our proxy statement in connection with our 2020 Annual Meeting of Shareholders may do so by submitting in writing a Nomination Notice, in compliance with the procedures and along with the other information required by our By-laws, to John F.W. Rogers, Secretary to the Board of Directors, at The Goldman Sachs Group, Inc., 200 West Street, New York, New York 10282 no earlier than October 24, 2019 and no later than November 23, 2019.

In accordance with our By-laws, for other matters (including director nominees not proposed pursuant to proxy access) not included in our proxy materials to be properly brought before the 2020 Annual Meeting of Shareholders, a shareholder's notice of the matter that the shareholder wishes to present must be delivered to John F.W. Rogers, Secretary to the Board of Directors, in compliance with the procedures and along with the other information required by our By-laws, at The Goldman Sachs Group, Inc., 200 West Street, New York, New York 10282, not less than 90 nor more than 120 days prior to the first anniversary of the 2019 Annual Meeting. As a result, any notice given by or on behalf of a shareholder pursuant to these provisions of our By-laws (and not pursuant to the SEC's Rule 14a-8) must be received no earlier than January 3, 2020 and no later than February 2, 2020.

Annex A: Calculation of Non-GAAP Measures

The U.S. Tax Legislation was enacted on December 22, 2017 and among other things, lowered U.S. corporate income tax rates as of January 1, 2018, implemented a territorial tax system and imposed a repatriation tax on deemed repatriated earnings of foreign subsidiaries. The estimated impact of the U.S. Tax Legislation was an increase in income tax expense of $4.40 billion for the fourth quarter of 2017. In the fourth quarter of 2018, the firm finalized this estimate to reflect the impact of updated information, including subsequent guidance issued by the U.S. Internal Revenue Service, resulting in a $487 million income tax benefit for 2018.

We believe that presenting certain of our 2018 results excluding the estimated impact of U.S. Tax Legislation is meaningful, as it reflects metrics considered by the Compensation Committee in making its compensation determinations. We have presented below the metrics used in this Proxy Statement including and excluding the impact of U.S. Tax Legislation. The adjusted results are non-GAAP measures and may not be comparable to similar non-GAAP measures used by other companies.

	2018 ROE (%)	2018 EPS ($)
As reported	13.3	25.27
As adjusted, excluding the impact of U.S. Tax Legislation	12.7	24.02

Calculation of 2018 and 2017 ROE

ROE is calculated by dividing net earnings applicable to common shareholders by average monthly common shareholders' equity. The table below presents the calculation of these metrics for 2018 and 2017 including and excluding the impact of U.S. Tax Legislation.

NUMERATOR FOR ROE – NET EARNINGS APPLICABLE TO COMMON SHAREHOLDERS	YEAR ENDED DECEMBER 31, 2018 ($ IN MILLIONS)	YEAR ENDED DECEMBER 31, 2017 ($ IN MILLIONS)
Net earnings applicable to common shareholders, as reported	9,860	3,685
Impact of U.S. Tax Legislation	(487)	4,400
Net earnings applicable to common shareholders, excluding the impact of U.S. Tax Legislation	9,373	8,085

DENOMINATOR FOR ROE – AVERAGE COMMON SHAREHOLDERS' EQUITY	YEAR ENDED DECEMBER 31, 2018 ($ IN MILLIONS)	YEAR ENDED DECEMBER 31, 2017 ($ IN MILLIONS)
Total shareholders' equity	85,238	85,959
Preferred stock	(11,253)	(11,283)
Common shareholders' equity, as reported	73,985	74,721
Impact of U.S. Tax Legislation	(42)	338
Common shareholders' equity, excluding the impact of U.S. Tax Legislation	73,943	75,059

2018 AND 2017 ROE	2018 ROE (%)	2017 ROE (%)
ROE	13.3	4.9
ROE, excluding the impact of U.S. Tax Legislation	12.7	10.8

Calculation of 2018 and 2017 EPS

Diluted EPS is computed by dividing net earnings applicable to common shareholders by the weighted average number of basic shares and dilutive potential shares of common stock. The table below presents the calculation of these metrics for 2018 and 2017 including and excluding the impact of U.S. Tax Legislation. See Note 21 to the consolidated financial statements included in our 2018 Annual Report on Form 10-K and Note 21 to the consolidated financial statements included in our 2017 Annual Report on Form 10-K for information on the calculation of the denominator of this calculation.

NUMERATOR FOR EPS	YEAR ENDED DECEMBER 31, 2018 ($ IN MILLIONS)	YEAR ENDED DECEMBER 31, 2017 ($ IN MILLIONS)
Net earnings applicable to common shareholders, as reported	9,860	3,685
Impact of U.S. Tax Legislation	(487)	4,400
Net earnings applicable to common shareholders, excluding the impact of U.S. Tax Legislation	9,373	8,085

DENOMINATOR FOR EPS	YEAR ENDED DECEMBER 31, 2018 (# IN MILLIONS)	YEAR ENDED DECEMBER 31, 2017 (# IN MILLIONS)
Weighted average number of basic shares and dilutive securities	390.2	409.1

2018 AND 2017 EPS	2018 EPS ($)	2017 EPS ($)
EPS	25.27	9.01
EPS, excluding the impact of U.S. Tax Legislation	24.02	19.76

Annex B: Additional Details on Director Independence

Set forth below is detailed information regarding certain categories of transactions reviewed and considered by our Governance Committee and our Board in making independence determinations, which our Board has determined are immaterial under our Director Independence Policy.

CATEGORY (Revenues, payments or donations by our firm must not exceed the greater of $1 million or 2% of the entity's consolidated gross revenues)	POSITION DURING 2018	DIRECTOR	PERCENT OF 2018 CGR
Ordinary Course Business Transactions (last 3 years) *Between Goldman Sachs and an entity with which a director or his or her immediate family member is or was affiliated as specified*	Executive Officer (for-profit entity)	■ Mittal and his family member(s)	Aggregate 2018 revenues to us from, or payments by us to, any such entity, if any, in each case did not exceed 0.01% of such other entity's 2018 consolidated gross revenues
	Employee (for profit entity)	None	N/A
	Officer/Employee (not-for-profit entity)	■ George and his family member(s) ■ Faust	Aggregate 2018 revenues to us from, or payments by us to, any such entity, if any, in each case did not exceed 0.20% of such other entity's 2018 consolidated gross revenues
Charitable Donations (during 2018) *Made in the ordinary course by Goldman Sachs (including our matching gift program), The Goldman Sachs Foundation or the donor advised funds under GS Gives program*	Officer/Employee/ Trustee/Board Member (not-for-profit entity)	Generally all independent directors and certain of their family members	Aggregate 2018 donations by us to such organization, if any, in each case did not exceed 0.90% of the other organization's 2018 consolidated gross revenues
Client Relationships (last 3 years) *Director or his or her immediate family member is a client on substantially the same terms as other similarly-situated clients (for example, brokerage accounts and investment in funds managed or sponsored by us in those accounts)*	N/A	■ Burns and her family member(s) ■ George and his family member(s) ■ Kullman and her family member(s) ■ Mittal and his family member(s) ■ Ogunlesi and his family member(s) ■ Oppenheimer and his family member(s) ■ Winkelman and his family member(s)	Aggregate 2018 revenues to us from each of these accounts did not exceed 0.01% of our 2018 consolidated gross revenues

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Directions to our 2019 Annual Meeting of Shareholders

The Goldman Sachs Group, Inc.

30 Hudson Street, 6th Floor
Jersey City, New Jersey 07302

PUBLIC TRANSPORTATION

30 Hudson Street is walking distance from the NY Waterway ferry, PATH train and Hudson-Bergen Light Rail.

- Ferry: The NY Waterway ferry to **Paulus Hook Pier** is available from Pier 11 / Wall Street, Brookfield Place / Battery Park City (WFC) and Midtown / West 39th Street
- PATH: The PATH train to **Exchange Place** is available from World Trade Center, Newark-Penn Station and Hoboken
- Light Rail: The Hudson-Bergen Light Rail to **Essex Street** is available from Hoboken, Bayonne and North Bergen

DRIVING DIRECTIONS

From Points North, South and West:

- I-95 (New Jersey Turnpike) to Exit 14 A-C toward I-78
- I-78 (NJ Turnpike Newark Bay Extension) east through toll barrier to Exit 14C
- Exit toward Jersey City / Columbus Drive
- Make slight right on Christopher Columbus Drive
- Turn right on Brunswick Street, 3 blocks to Montgomery Street
- Turn left onto Montgomery Street, 10 blocks to Hudson Street
- Turn right onto Hudson Street, 5 blocks to 30 Hudson

From Points East:

- Take Holland Tunnel to New Jersey
- Turn left at 2nd signal onto Manila Avenue/Grove Street
- South on Manila Avenue/Grove Street to Montgomery Street
- Turn left onto Montgomery Street, 5 blocks to Hudson Street
- Turn right onto Hudson Street, 5 blocks to 30 Hudson

Parking is available at 55 Hudson Street

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CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT and AFFIDAVIT
Related to Contract/Amendment/Solicitation
EDS # 158300

SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting the EDS:

LRS Holdings, LLC

Enter d/b/a if applicable:

The Disclosing Party submitting this EDS is:

a legal entity currently holding an interest in the Applicant

The Disclosing Party holds an interest in

Lakeshore Recycling Systems, LLC and EDS is 158299

B. Business address of the Disclosing Party:

6132 W. Oakton Avenue
Morton Grove, IL 60053
United States

C. Telephone:

847-779-7500

Fax:

D. Name of contact person:

Mr. Scott Jansen

SECTION II -- DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:

Limited liability company

Is the Disclosing Party incorporated or organized in the State of Illinois?

No

State or foreign country of incorporation or organization:

Delaware

Registered to do business in the State of Illinois as a foreign entity?

Yes

B. DISCLOSING PARTY IS A LEGAL ENTITY:

1.a.2 Does the Disclosing Party have any officers?

Yes

1.a.4 List below the full names and titles of all executive officers of the entity.

Title:	Chief Executive Officer
Officer:	Mr. Alan Handley
Role:	Officer

– – – –

Title: Chief Executive Officer

1.b.3 Are there any legal entities that directly or indirectly control the day-to-day management of the Disclosing Party as a general partner, managing member, manager, or other capacity?

No

2. Ownership Information

Please confirm ownership information concerning each person or entity that having a direct or indirect beneficial interest in excess of 7.5% of the Disclosing Party (your entity). Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a limited lability company, or interest of a beneficiary of a trust, estate, or other similar entity. Note: Each legal entity below may be required to submit an EDS on its own behalf.

As reported by the Disclosing Party, the immediate owner(s) of the Disclosing Party is/ are listed below:

- Lakeshore Waste Services LLC - 34.4%
- Recycling Systems, Inc. - 34.4%
- Goldman Sachs & Co. LLC - 10.2%

Owner Details

Name	Business Address
Goldman Sachs & Co. LLC	200 West Street 26th Floor New York, NY United States
Lakeshore Waste Services LLC	6132 Oakton Street Morton Grove, IL United States
Recycling Systems, Inc.	6132 W. Oakton Avenue Morton Grove, IL United States

SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

A. Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS?

No

B. Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS?

No

D. Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code ("MCC")) in the Disclosing Party?

No

SECTION V -- CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage of any child support obligations by any Illinois court of competent jurisdiction?

No

B. FURTHER CERTIFICATIONS

1. [This certification applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e. an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

This matter is not a contract handled by the Department of Procurement Services

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

I certify the above to be true

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;
c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;
d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and
e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

I certify the above to be true

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapter 2-56 (Inspector General) and Chapter 2-156 (Governmental Ethics).

I certify the above to be true

5. Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;
b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or
d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

I certify the above to be true

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of

- bid-rigging in violation of 720 ILCS 5/33E-3;
- bid-rotating in violation of 720 ILCS 5/33E-4; or
- any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

I certify the above to be true

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

I certify the above to be true

11. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago.

None

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official

City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

The Disclosing Party certifies, as defined in MCC Section 2-32-455(b), the Disclosing Party

is not a "financial institution"

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

If the Disclosing Party cannot make this verification, the Disclosing Party must disclose all required information in the space provided below or in an attachment in the "Additional Info" tab. Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

I can make the above verification

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics, and may also be obtained from

the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

I acknowledge and consent to the above

The Disclosing Party understands and agrees that:

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

I acknowledge and consent to the above

APPENDIX A - FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof

currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.1.a, if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

No

APPENDIX B - BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

No

ADDITIONAL INFO

Please add any additional explanatory information here. If explanation is longer than 1000 characters, you may add an attachment below. Please note that your EDS, including all attachments, becomes available for public viewing upon contract award. Your attachments will be viewable "as is" without manual redaction by the City. You

are responsible for redacting any non-public information from your documents before uploading.

List of attachments uploaded by vendor

None.

CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and all applicable appendices, on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and all applicable appendices, are true, accurate and complete as of the date furnished to the City. Submission of this form constitutes making the oath associated with notarization.

/s/ 12/24/2020
Mr. Scott Jansen
Financial Analyst
LRS Holdings, LLC

This is a printed copy of the Economic Disclosure Statement, the original of which is filed electronically with the City of Chicago. Any alterations must be made electronically, alterations on this printed copy are void and of no effect.

CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT and AFFIDAVIT
Related to Contract/Amendment/Solicitation
EDS # 158301

SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting the EDS:

Lakeshore Waste Services LLC

Enter d/b/a if applicable:

The Disclosing Party submitting this EDS is:

a legal entity currently holding an interest in the Applicant

The Disclosing Party holds an interest in

Lakeshore Recycling Systems, LLC and EDS is 158299

B. Business address of the Disclosing Party:

6132 Oakton Street
Morton Grove, IL 60053
United States

C. Telephone:

773-685-8811

Fax:

773-685-6043

D. Name of contact person:

Mr. Joshua Barton Connell

SECTION II -- DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:

Limited liability company

Is the Disclosing Party incorporated or organized in the State of Illinois?

Yes

B. DISCLOSING PARTY IS A LEGAL ENTITY:

1.a.2 Does the Disclosing Party have any officers?

Yes

1.a.4 List below the full names and titles of all executive officers of the entity.

Title:	Managing Member
Officer:	Mr. Joshua Connell
Role:	Officer
Title:	Member
Officer:	Mr. Robert Walter
Role:	Officer

B. CERTIFICATION REGARDING CONTROLLING INTEREST

1.b.1 Are there any individuals who directly or indirectly control the day-to-day management of the Disclosing Party as a general partner, managing member, manager, or other capacity?

Yes

1.b.2 List all general partners, managing members, managers, and any others who directly or indirectly control the day-to-day management of the Disclosing Party. Don't include any legal entities in this answer- these will be named later:

Name:	Mr. Joshua Connell
Title:	Managing Member
Name:	Mr. Robert Walter

Title: Member

1.b.3 Are there any legal entities that directly or indirectly control the day-to-day management of the Disclosing Party as a general partner, managing member, manager, or other capacity?

No

2. Ownership Information

Please confirm ownership information concerning each person or entity that having a direct or indirect beneficial interest in excess of 7.5% of the Disclosing Party (your entity). Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a limited lability company, or interest of a beneficiary of a trust, estate, or other similar entity. Note: Each legal entity below may be required to submit an EDS on its own behalf.

As reported by the Disclosing Party, the immediate owner(s) of the Disclosing Party is/ are listed below:

There are no owners with greater than 7.5 percent ownership in the Disclosing Party.

SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

A. Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS?

No

B. Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS?

No

D. Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code ("MCC")) in the Disclosing Party?

No

SECTION V -- CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage of any child support obligations by any Illinois court of competent jurisdiction?

No

B. FURTHER CERTIFICATIONS

1. [This certification applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e. an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

I certify the above to be true

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

I certify the above to be true

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;
d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and
e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

I certify the above to be true

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapter 2-56 (Inspector General) and Chapter 2-156 (Governmental Ethics).

I certify the above to be true

5. Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;
b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or
d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

I certify the above to be true

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of

- bid-rigging in violation of 720 ILCS 5/33E-3;
- bid-rotating in violation of 720 ILCS 5/33E-4; or

- any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

I certify the above to be true

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

I certify the above to be true

11. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago.

None

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

The Disclosing Party certifies, as defined in MCC Section 2-32-455(b), the Disclosing Party

is not a "financial institution"

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

If the Disclosing Party cannot make this verification, the Disclosing Party must disclose all required information in the space provided below or in an attachment in the "Additional Info" tab. Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery

era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

I can make the above verification

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

I acknowledge and consent to the above

The Disclosing Party understands and agrees that:

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/ or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

I acknowledge and consent to the above

APPENDIX A - FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.1.a, if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

No

APPENDIX B - BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

No

ADDITIONAL INFO

Please add any additional explanatory information here. If explanation is longer than 1000 characters, you may add an attachment below. Please note that your EDS, including all attachments, becomes available for public viewing upon contract award. Your attachments will be viewable "as is" without manual redaction by the City. You are responsible for redacting any non-public information from your documents before uploading.

List of attachments uploaded by vendor

None.

CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and all applicable appendices, on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and all applicable appendices, are true, accurate and complete as of the date furnished to the City. Submission of this form constitutes making the oath associated with notarization.

/s/ 12/23/2020
Mr. Joshua Barton Connell
Managing Member
Lakeshore Waste Services LLC

This is a printed copy of the Economic Disclosure Statement, the original of which is filed electronically with the City of Chicago. Any alterations must be made electronically, alterations on this printed copy are void and of no effect.

CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT and AFFIDAVIT
Related to Contract/Amendment/Solicitation
EDS # 158302

SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting the EDS:

Recycling Systems, Inc.

Enter d/b/a if applicable:

Golf Inc

The Disclosing Party submitting this EDS is:

a legal entity currently holding an interest in the Applicant

The Disclosing Party holds an interest in

Lakeshore Recycling Systems, LLC and EDS is 158299

B. Business address of the Disclosing Party:

6132 W. Oakton Avenue
Morton Grove, IL 60053
United States

C. Telephone:

847-929-6369

Fax:

D. Name of contact person:

Mr. Jerry Joseph Golf

SECTION II -- DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:

Person or sole proprietor

SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

A. Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS?

No

B. Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS?

No

D. Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code ("MCC")) in the Disclosing Party?

No

SECTION V -- CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage of any child support obligations by any Illinois court of competent jurisdiction?

No

B. FURTHER CERTIFICATIONS

1. [This certification applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this

EDS, neither the Disclosing Party nor any Affiliated Entity has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e. an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

I certify the above to be true

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

I certify the above to be true

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;
c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;
d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and
e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

I certify the above to be true

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapter 2-56 (Inspector General) and Chapter 2-156 (Governmental Ethics).

I certify the above to be true

5. Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;
b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or
d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

I certify the above to be true

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of

- bid-rigging in violation of 720 ILCS 5/33E-3;
- bid-rotating in violation of 720 ILCS 5/33E-4; or
- any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

I certify the above to be true

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

I certify the above to be true

11. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago.

None

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law.

None

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

The Disclosing Party certifies, as defined in MCC Section 2-32-455(b), the Disclosing Party

is not a "financial institution"

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

If the Disclosing Party cannot make this verification, the Disclosing Party must disclose all required information in the space provided below or in an attachment in the "Additional Info" tab. Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

I can make the above verification

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands

that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

I acknowledge and consent to the above

The Disclosing Party understands and agrees that:

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/ or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

I acknowledge and consent to the above

APPENDIX A - FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.1.a, if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

No

APPENDIX B - BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

No

ADDITIONAL INFO

Please add any additional explanatory information here. If explanation is longer than 1000 characters, you may add an attachment below. Please note that your EDS, including all attachments, becomes available for public viewing upon contract award. Your attachments will be viewable "as is" without manual redaction by the City. You are responsible for redacting any non-public information from your documents before uploading.

List of attachments uploaded by vendor

None.

CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and all applicable appendices, on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and all applicable appendices, are true, accurate and complete as of the date furnished to the City. Submission of this form constitutes making the oath associated with notarization.

/s/ 12/23/2020
Mr. Jerry Joseph Golf
Managing Officer
Recycling Systems, Inc.

This is a printed copy of the Economic Disclosure Statement, the original of which is filed electronically with the City of Chicago. Any alterations must be made electronically, alterations on this printed copy are void and of no effect.

CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT and AFFIDAVIT
Related to Contract/Amendment/Solicitation
EDS # 158303

SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting the EDS:

Goldman Sachs & Co. LLC

Enter d/b/a if applicable:

The Disclosing Party submitting this EDS is:

a legal entity currently holding an interest in the Applicant

B. Business address of the Disclosing Party:

200 West Street
26th Floor
New York, NY 10282
United States

C. Telephone:

212-855-9130

Fax:

D. Name of contact person:

Mr. Raj Grewal

SECTION II -- DISCLOSURE OF OWNERSHIP INTERESTS

A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:

Is the Disclosing Party incorporated or organized in the State of Illinois?

B. DISCLOSING PARTY IS A LEGAL ENTITY:

1.a.1 Does the Disclosing Party have any directors?

1.a.3 List below the full names and titles of all executive officers and all directors, if any, of the entity. Do not include any directors who have no power to select the entity's officers.

2. Ownership Information

Please confirm ownership information concerning each person or entity that having a direct or indirect beneficial interest in excess of 7.5% of the Disclosing Party (your entity). Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a limited lability company, or interest of a beneficiary of a trust, estate, or other similar entity. Note: Each legal entity below may be required to submit an EDS on its own behalf.

As reported by the Disclosing Party, the immediate owner(s) of the Disclosing Party is/ are listed below:

There are no owners with greater than 7.5 percent ownership in the Disclosing Party.

SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

A. Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS?

B. Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS?

C. Please identify the name(s) of such City elected official(s) and describe such income or compensation.

D. Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a

financial interest (as defined in Chapter 2-156 of the Municipal Code ("MCC")) in the Disclosing Party?

SECTION V -- CERTIFICATIONS

A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns 10% or more of the Disclosing Party been declared in arrearage of any child support obligations by any Illinois court of competent jurisdiction?

B. FURTHER CERTIFICATIONS

1. [This certification applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e. an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).

2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal,

state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;

c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;
d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and
e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.

4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapter 2-56 (Inspector General) and Chapter 2-156 (Governmental Ethics).

5. Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:

a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;
b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or
d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).

6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of

- bid-rigging in violation of 720 ILCS 5/33E-3;
- bid-rotating in violation of 720 ILCS 5/33E-4; or

- any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.

7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.

11. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12-month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago.

12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12-month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $25 per recipient, or (iii) a political contribution otherwise duly reported as required by law.

C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

The Disclosing Party certifies, as defined in MCC Section 2-32-455(b), the Disclosing Party

E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

If the Disclosing Party cannot make this verification, the Disclosing Party must disclose all required information in the space provided below or in an attachment in the "Additional Info" tab. Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.

The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.

SECTION VII - FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:

A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.

B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.

The Disclosing Party understands and agrees that:

C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.

D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.

E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the

information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

APPENDIX A - FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.

"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.1.a, if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a 7.5% ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

APPENDIX B - BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5% (an "Owner"). It

is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?

ADDITIONAL INFO

Please add any additional explanatory information here. If explanation is longer than 1000 characters, you may add an attachment below. Please note that your EDS, including all attachments, becomes available for public viewing upon contract award. Your attachments will be viewable "as is" without manual redaction by the City. You are responsible for redacting any non-public information from your documents before uploading.

List of attachments uploaded by vendor

None.

CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and all applicable appendices, on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and all applicable appendices, are true, accurate and complete as of the date furnished to the City. Submission of this form constitutes making the oath associated with notarization.

/s/

Goldman Sachs & Co. LLC

This is a printed copy of the Economic Disclosure Statement, the original of which is filed electronically with the City of Chicago. Any alterations must be made electronically, alterations on this printed copy are void and of no effect.