



\$196,691,644,885
The Goldman Sachs Group, Inc.

Debt Securities
Warrants
Purchase Contracts
Units
Preferred Stock
Depository Shares
Common Stock

The Goldman Sachs Group, Inc. from time to time may offer to sell debt securities, warrants, purchase contracts, preferred stock, either separately or represented by depository shares, and common stock, as well as units comprised of these securities or securities of third parties. The debt securities, warrants, purchase contracts and preferred stock may be convertible into or exercisable or exchangeable for common or preferred stock or other securities of The Goldman Sachs Group, Inc. or debt or equity securities of one or more other entities. The common stock of The Goldman Sachs Group, Inc. is listed on the New York Stock Exchange and trades under the ticker symbol "GS".

\$196,691,644,885 of securities have been registered on our registration statement, filed on Form S-3. The aggregate amount may be used by The Goldman Sachs Group, Inc., GS Finance Corp., Goldman Sachs Capital VI and Goldman Sachs Capital VII to offer securities pursuant to this prospectus or any of the other prospectuses contained in the registration statement.

The Goldman Sachs Group, Inc. may offer and sell these securities to or through one or more underwriters, dealers and agents, including the firm named below, or directly to purchasers, on a continuous or delayed basis.

This prospectus describes some of the general terms that may apply to these securities and the general manner in which they may be offered. The specific terms of any securities to be offered, and the specific manner in which they may be offered, will be described in the applicable prospectus supplement to this prospectus.

These securities are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.

Neither the U.S. Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

Goldman Sachs may use this prospectus in the initial sale of these securities. In addition, Goldman Sachs & Co. LLC or any other affiliate of Goldman Sachs may use this prospectus in a market-making transaction in any of these or similar securities after its initial sale. ***Unless Goldman Sachs or its agent informs the purchaser otherwise in the confirmation of sale, this prospectus is being used in a market-making transaction.***

All descriptions of, or references to, LIBOR in this prospectus relate solely to securities initially offered and sold prior to the date hereof for which LIBOR is the base rate or referenced in the securities or the calculation of the base rate. This prospectus may be used in ongoing market-making transactions in these securities, as well as other securities initially offered and sold prior to the date hereof.

Goldman Sachs & Co. LLC

Prospectus dated February 13, 2023.

Table of Contents

AVAILABLE INFORMATION

The Goldman Sachs Group, Inc. is required to file annual, quarterly and current reports, proxy statements and other information with the U.S. Securities and Exchange Commission (the “SEC”). Our filings with the SEC are available to the public through the SEC’s Internet site at <http://www.sec.gov>.

We have filed a registration statement on Form S-3 with the SEC relating to the securities covered by this prospectus. This prospectus is a part of the registration statement and does not contain all of the information in the registration statement. Whenever a reference is made in this prospectus to a contract or other document of The Goldman Sachs Group, Inc., please be aware that the reference is only a summary and that you should refer to the exhibits that are a part of the registration statement for a copy of the applicable contract or other document. You may review a copy of the registration statement through the SEC’s Internet site.

The SEC’s rules allow us to “incorporate by reference” information into this prospectus. This means that we can disclose important information to you by referring you to any of the SEC filings referenced in the list below. Any information referred to in this way in this prospectus or the applicable prospectus supplement is considered part of this prospectus from the date we file that document. Any reports filed by us with the SEC after the date of this prospectus and before the date that the offering of securities by means of this prospectus is terminated will automatically update and, where applicable, supersede any information contained in this prospectus or incorporated by reference in this prospectus.

The Goldman Sachs Group, Inc. incorporates by reference into this prospectus the following documents or information filed with the SEC (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

- (1) Annual Report on Form 10-K for the fiscal year ended [December 31, 2021](#) (File No. 001-14965);
- (2) Quarterly Reports on Form 10-Q for the quarterly periods ended [March 31, 2022](#), [June 30, 2022](#) and [September 30, 2022](#) (File No. 001-14965);
- (3) Current Reports on Form 8-K dated and filed on [January 18, 2022](#) (which is only incorporated by reference to the extent stated therein), dated and filed on [January 24, 2022](#), dated and filed on [January 28, 2022](#), dated and filed on [March 15, 2022](#), dated and filed on [March 21, 2022](#), dated and filed on [March 28, 2022](#), dated and filed on [April 14, 2022](#) (which is only incorporated by reference to the extent stated therein), dated April 28, 2022 and filed on [April 29, 2022](#), dated April 28, 2022 and filed on [April 29, 2022](#), dated and filed on [June 13, 2022](#), dated and filed on [June 27, 2022](#), dated and filed on [July 18, 2022](#) (which is only incorporated by reference to the extent stated therein), dated and filed on [August 23, 2022](#), dated and filed on [September 22, 2022](#), dated and filed on [October 18, 2022](#) (which is only incorporated by reference to the extent stated therein), dated October 26, 2022 and filed on [October 28, 2022](#) (which is only incorporated by reference to the extent stated therein), dated and filed on [November 1, 2022](#), dated January 12, 2023 and filed on [January 13, 2023](#), dated and filed on [January 17, 2023](#) (which is only incorporated by reference to the extent stated therein) and dated and filed on [January 27, 2023](#) (File No. 001-14965);
- (4) All documents filed by The Goldman Sachs Group, Inc. under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 (the “Exchange Act”) on or after the date of this prospectus and before the termination of the offering of securities under this prospectus;
- (5) Solely with regard to the securities covered by this prospectus that were initially offered and sold under previously filed registration statements of The Goldman Sachs Group, Inc. and that from time to time may be reoffered and resold in market-making transactions under this

Table of Contents

prospectus, the information in the prospectus supplements relating to those securities that were previously filed by The Goldman Sachs Group, Inc. in connection with their initial offer and sale (except to the extent that any such information has been modified or superseded by other information included or incorporated by reference in this prospectus); and

- (6) The descriptions of our common stock contained in our Registration Statement filed under Section 12 of the Securities Exchange Act of 1934 and any amendment or report filed for the purpose of updating that description, and any other Registration Statement on Form 8-A relating to any securities offered by this prospectus.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all documents referred to above which have been or may be incorporated by reference into this prospectus excluding exhibits to those documents unless they are specifically incorporated by reference into those documents. You can request those documents from Investor Relations, 200 West Street, New York, New York 10282, telephone (212) 902-0300.

When we refer to “Goldman Sachs” or the “Firm” in this prospectus, we mean The Goldman Sachs Group, Inc., together with its consolidated subsidiaries and affiliates. References to “The Goldman Sachs Group, Inc.”, “we”, “our” or “us” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus or incorporated by reference into this prospectus as further described above under “Available Information”. This summary does not contain all the information that you should consider before investing in the securities being offered by this prospectus. You should carefully read the entire prospectus, the documents incorporated by reference into this prospectus, the applicable prospectus supplement, if applicable, and the prospectus supplement relating to the securities that you propose to buy, especially any description of investment risks that we may include in the applicable prospectus supplement.

The Goldman Sachs Group, Inc.

The Goldman Sachs Group, Inc. is a leading global financial institution that delivers a broad range of financial services across investment banking, securities, investment management and consumer banking to a large 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’s principal executive offices are located at 200 West Street, New York, New York 10282, telephone (212) 902-1000. The Goldman Sachs Group, Inc. is a bank holding company and a financial holding company regulated by the Board of Governors of the Federal Reserve System (the “Federal Reserve Board”). The Firm’s U.S. depository institution subsidiary, Goldman Sachs Bank USA, is a New York State-chartered bank.

The Securities We Are Offering

We may offer any of the following securities from time to time:

- debt securities;
- warrants;
- purchase contracts;
- units, comprised of one or more debt securities, warrants, purchase contracts, shares of preferred stock and depository shares described in this prospectus, as well as debt or equity securities of third parties, in any combination;
- preferred stock, either directly or represented by depository shares; and
- common stock.

When we use the term “security” or “securities” in this prospectus, we mean any of the securities we may offer with this prospectus, unless we say otherwise. This prospectus, including the following summary, describes the general terms that may apply to the securities; the specific terms of any particular securities that we may offer will be described in the applicable prospectus supplement to this prospectus and may differ from the general terms described herein.

Debt Securities

The debt securities may be senior or subordinated in right of payment. For any particular debt securities we offer, the applicable prospectus supplement will describe the title and series of the debt securities, the aggregate principal amount and the original issue price; the ranking, whether senior or subordinated; the stated maturity; the redemption terms, if any; the rate or manner of calculating the rate and the payment dates for interest, if any; the amount or manner of calculating the amount

payable at maturity and whether that amount may be paid by delivering cash, securities or other property; the terms on which the debt securities may be convertible into or exercisable or exchangeable for common stock or other securities of The Goldman Sachs Group, Inc. or any other entity, if any; and any other specific terms. We will issue the senior and subordinated debt securities under separate debt indentures (as described in “Description of Debt Securities We May Offer—The Senior Debt Indentures and the Subordinated Debt Indenture”), each between us and The Bank of New York Mellon, as trustee.

Warrants

We may offer two types of warrants:

- warrants to purchase our debt securities; and
- warrants to purchase or sell, or whose cash value is determined by reference to the performance, level or value of, one or more of the following:
 - securities of one or more issuers, including our common or preferred stock or other securities described in this prospectus or debt or equity securities of third parties;
 - one or more currencies;
 - one or more commodities;
 - any other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstance;
 - one or more indices; and/or
 - one or more baskets of the items described above.

For any particular warrants we offer, the applicable prospectus supplement will describe the underlying property; the expiration date; the exercise price or the manner of determining the exercise price; the amount and kind, or the manner of determining the amount and kind, of property to be delivered by you or us upon exercise; and any other specific terms. We may issue the warrants under the warrant indenture between us and The Bank of New York Mellon, as trustee, or under warrant agreements between us and one or more warrant agents.

Purchase Contracts

We may offer purchase contracts for the purchase or sale of, or whose cash value is determined by reference to the performance, level or value of, one or more of the following:

- securities of one or more issuers, including our common or preferred stock or other securities described in this prospectus and debt or equity securities of third parties;
- one or more currencies;
- one or more commodities;
- any other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstance;
- one or more indices; and/or
- one or more baskets of the items described above.

For any particular purchase contracts we offer, the applicable prospectus supplement will describe the underlying property; the settlement date; the purchase price or manner of determining the purchase

price and whether it must be paid when the purchase contract is issued or at a later date; the amount and kind, or the manner of determining the amount and kind, of property to be delivered at settlement; whether the holder will pledge property to secure the performance of any obligations the holder may have under the purchase contract; and any other specific terms. We may issue purchase contracts under a debt indenture described above or a unit agreement described below.

Units

We may offer units, comprised of one or more debt securities, warrants, purchase contracts, shares of preferred stock, depositary shares and shares of common stock described in this prospectus, as well as debt or equity securities of third parties, in any combination. For any particular units we offer, the applicable prospectus supplement will describe the particular securities comprising each unit; the terms on which those securities will be separable, if any; whether the holder will pledge property to secure the performance of any obligations the holder may have under the unit; and any other specific terms of the units. We may issue the units under unit agreements between us and one or more unit agents.

Preferred Stock and Depositary Shares

We may offer our preferred stock, par value \$0.01 per share, in one or more series. For any particular series we offer, the applicable prospectus supplement will describe the specific designation; the aggregate number of shares offered; the rate and periods, or manner of calculating the rate and periods, for dividends, if any; the stated value and liquidation preference amount, if any; the voting rights, if any; the terms on which the series will be convertible into or exercisable or exchangeable for our common stock, preferred stock of another series or other securities described in this prospectus, debt or equity securities of third parties or property, if any; the redemption terms, if any; and any other specific terms. We may also offer depositary shares, each of which would represent an interest in a fractional share or multiple shares of our preferred stock. We may issue the depositary shares under deposit agreements between us and one or more depositaries.

Common Stock

We may offer our common stock, par value \$0.01 per share. For any offering of common stock, the applicable prospectus supplement will describe the aggregate number of shares offered and any other specific terms.

Form of Securities

We will issue the securities in book-entry form through one or more depositaries, such as The Depository Trust Company, Euroclear or Clearstream, named in the applicable prospectus supplement. Each sale of a security in book-entry form will settle in immediately available funds through the applicable depositary, unless otherwise stated. We will issue the securities only in registered form, without coupons.

Payment Currencies

Amounts payable in respect of the securities, including the original issue price, will be payable in U.S. dollars, unless the applicable prospectus supplement says otherwise.

Listing

If any securities are to be listed or quoted on a securities exchange or quotation system, the applicable prospectus supplement will say so.

Use of Proceeds

We intend to use the net proceeds from the sales of the securities to provide additional funds for our operations and for other general corporate purposes.

Manner of Offering

The securities will be offered in connection with their initial issuance or in market-making transactions by our affiliates after initial issuance. Those offered in market-making transactions may be securities that we will not issue until after the date of this prospectus as well as securities that we have previously issued.

When we issue new securities, we may offer them for sale to or through underwriters, dealers and agents, including our affiliates, or directly to purchasers. The applicable prospectus supplement will include any required information about the firms we use and the discounts or commissions we may pay them for their services.

Our affiliates that we refer to above may include, among others, Goldman Sachs & Co. LLC ("GS&Co."), for offers and sales in the United States, and Goldman Sachs International, Goldman Sachs (Asia) L.L.C. and Goldman Sachs (Singapore) Pte. for offers and sales outside the United States.

Conflicts of Interest

GS&Co. is an affiliate of The Goldman Sachs Group, Inc. and, as such, will have a "conflict of interest" in any offering of the securities within the meaning of Financial Industry Regulatory Authority, Inc. ("FINRA") Rule 5121. Consequently, any offering of the securities will be conducted in compliance with the provisions of Rule 5121. GS&Co. will not be permitted to sell securities in any offering to an account over which it exercises discretionary authority without the prior specific written approval of the account holder.

Risks and Considerations Relating to the Securities

There are a number of risks and considerations that you should take into account prior to investing in the securities. Please read "Risks Relating to Regulatory Resolution Strategies and Long-Term Debt Requirements", "Considerations Relating to Floating Rate Securities", "Considerations Relating to Indexed Securities", "Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency" and "United States Taxation—Taxation of Debt Securities—Foreign Account Tax Compliance Act ("FATCA") Withholding" for more information.

For a discussion of important business and financial risks relating to The Goldman Sachs Group, Inc., please see "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which are incorporated in this prospectus by reference (and in any of our annual or quarterly reports for a subsequent fiscal period that are so incorporated).

**RISKS RELATING TO REGULATORY RESOLUTION STRATEGIES AND
LONG-TERM DEBT REQUIREMENTS**

Please note that in this section entitled “Risks Relating to Regulatory Resolution Strategies and Long-Term Debt Requirements”, references to “Group Inc.”, “we” and “our” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries. References to our “debt securities”, including “fixed rate debt securities”, “floating rate debt securities” and “indexed debt securities”, are explained below under “Description of Debt Securities We May Offer”.

The application of regulatory resolution strategies could increase the risk of loss for holders of our securities in the event of the resolution of Group Inc.

Your ability to recover the full amount that would otherwise be payable on our securities in a proceeding under the U.S. Bankruptcy Code may be impaired by the exercise by the FDIC of its powers under the “orderly liquidation authority” under Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”). In addition, the single point of entry strategy described below is intended to impose losses at the top-tier holding company level in the resolution of a global systemically important bank (“G-SIB”) such as Group Inc.

Title II of the Dodd-Frank Act created a resolution regime known as the “orderly liquidation authority” to which financial companies, including bank holding companies such as Group Inc., can be subjected. Under the orderly liquidation authority, the FDIC may be appointed as receiver for a financial company for purposes of liquidating the entity if, upon the recommendation of applicable regulators, the Secretary of the Treasury determines, among other things, that the entity is in severe financial distress, that the entity’s failure would have serious adverse effects on the U.S. financial system and that resolution under the orderly liquidation authority would avoid or mitigate those effects. Absent such determinations, Group Inc., as a U.S. bank holding company, would remain subject to the U.S. Bankruptcy Code.

If the FDIC is appointed as receiver under the orderly liquidation authority, then the orderly liquidation authority, rather than the U.S. Bankruptcy Code, would determine the powers of the receiver and the rights and obligations of creditors and other parties who have transacted with Group Inc. There are substantial differences between the rights available to creditors in the orderly liquidation authority and in the U.S. Bankruptcy Code, including the right of the FDIC under the orderly liquidation authority to disregard the strict priority of creditor claims in some circumstances (which would otherwise be respected by a bankruptcy court) and the use of an administrative claims procedure to determine creditors’ claims (as opposed to the judicial procedure utilized in bankruptcy proceedings). In certain circumstances under the orderly liquidation authority, the FDIC could elevate the priority of claims that it determines necessary to facilitate a smooth and orderly liquidation without the need to obtain creditors’ consent or prior court review. In addition, the FDIC has the right to transfer claims to a third party or “bridge” entity under the orderly liquidation authority.

The FDIC has announced that a single point of entry strategy may be a desirable strategy to resolve a large financial institution such as Group Inc. in a manner that would, among other things, impose losses on shareholders, debt holders (including, in our case, holders of our securities) and other creditors of the top-tier holding company (in our case, Group Inc.), while permitting the holding company’s subsidiaries to continue to operate. In addition, the Federal Reserve Board has adopted requirements that U.S. G-SIBs, including Group Inc., maintain minimum amounts of long-term debt and total loss-absorbing capacity to facilitate the application of the single point of entry resolution strategy. It is possible that the application of the single point of entry strategy under the orderly liquidation authority—in which Group Inc. would be the only entity to enter resolution proceedings—would result in

[Table of Contents](#)

greater losses to holders of our securities (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. or other available resources 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, holders of our debt securities 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 our eligible LTD (defined below) and holders of our other debt securities could face losses ahead of our other similarly situated creditors in a resolution under the orderly liquidation authority if the FDIC exercised its right, described above, to disregard the priority of creditor claims.

The orderly liquidation authority also provides the FDIC with authority to cause creditors and shareholders of a 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 the orderly liquidation authority, claims of creditors (including holders of our securities) 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 the orderly liquidation authority, 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. For example, the Bank of England requires a certain amount of intercompany funding that we provide to our material U.K. subsidiaries to contain a contractual trigger to expressly permit the Bank of England to exercise such "bail-in" powers in certain circumstances. 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 holding company 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.

As required by the Dodd-Frank Act and regulations issued by the Federal Reserve Board and the FDIC, we are required to provide to the Federal Reserve Board and the FDIC a plan for our rapid and orderly resolution in the event of material financial distress affecting the firm or the failure of Group Inc. 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

[Table of Contents](#)

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 our 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' derivatives contracts or transfer them to another entity so that cross-default and early termination rights would be stayed under the International Swaps and Derivatives Association Universal Resolution Stay Protocol or International Swaps and Derivatives Association 2018 U.S. Resolution Stay Protocol, as applicable, which would result in holders of our eligible LTD (defined below) and holders of our other debt securities incurring losses ahead of the beneficiaries of those guarantee obligations. It is also possible that holders of our eligible LTD and holders of our other debt securities could incur losses ahead of other similarly situated creditors of our major subsidiaries. If Group Inc.'s preferred resolution strategy were not successful, Group Inc.'s financial condition would be adversely impacted and Group Inc.'s security holders, including holders of our debt securities, may as a consequence be in a worse position than if the strategy had not been implemented. In all cases, any payments to holders of our debt securities are dependent on our ability to make such payments and are therefore subject to our credit risk.

Senior debt securities issued on or after January 1, 2017 under the 2008 indenture will provide only limited acceleration and enforcement rights.

On December 15, 2016, the Federal Reserve Board adopted rules (the "TLAC Rules") that require the eight U.S. G-SIBs, including Group Inc., among other things, to maintain minimum amounts of long-term debt—i.e., debt having a maturity greater than one year from issuance—satisfying certain eligibility criteria ("eligible LTD") commencing January 1, 2019. The TLAC Rules disqualify from eligible LTD, among other instruments, senior debt securities issued on or after December 31, 2016 that permit acceleration for reasons other than insolvency or payment default. As a result of the TLAC Rules, we have modified the 2008 indenture under which our senior debt securities may be issued to provide that,

[Table of Contents](#)

for any such debt securities issued on or after January 1, 2017, the only events of default will be payment defaults that continue for a 30-day grace period and insolvency events as specified herein, unless the applicable prospectus supplement says otherwise. Any other default under or breach of the indenture or any such securities will not give rise to an event of default, whether after notice, the passage of time or otherwise. As a consequence, if any such other default or breach occurs, neither the trustee nor the holders of any such securities issued on or after January 1, 2017 will be entitled to accelerate the maturity of any securities — that is, they will not be entitled to declare the principal of any securities to be immediately due and payable because of such other default or breach (other than any securities whose terms specify otherwise, as described in the applicable prospectus supplement). These other defaults and breaches would include, among others, any breach of the covenants described below under “— Mergers and Similar Transactions”. In addition, if any such other default or breach occurs, neither the trustee nor the holders of any such securities will be entitled to enforce or seek any remedy under the 2008 indenture or the securities, except as described below under “— Default, Remedies and Waiver of Default” in respect of certain covenant breaches.

The limitations on events of default, acceleration rights and other remedies described in the prior paragraph do not apply with regard to any securities issued under the 1999 indenture or to any securities issued prior to January 1, 2017 under the 2008 indenture. **Therefore, if certain defaults or breaches occur, holders of securities issued before January 1, 2017 may be able to accelerate their securities so that such securities become immediately due and payable while you, as a holder of securities issued on or after January 1, 2017, may not be able to do so. In such an event, our obligation to repay the accelerated securities in full could adversely affect our ability to make timely payments on your securities thereafter.** These limitations on your rights and remedies could adversely affect the market value of your securities, especially during times of financial stress for us or our industry.

Please see “Description of Debt Securities We May Offer — Default, Remedies and Waiver of Default” below for an explanation of the terms “1999 indenture”, “2008 indenture”, “event of default” and “covenant breach”, as well as for information regarding acceleration rights and remedies.

Subordinated debt securities issued under the subordinated debt indenture provide even more limited acceleration and enforcement rights.

For any subordinated debt securities issued under the subordinated debt indenture, unless the applicable prospectus supplement says otherwise, events of default, acceleration rights and other remedies will also be limited as described below in “Description of Debt Securities We May Offer — Subordination Provisions”. These limitations are greater than those described in the prior paragraph with regard to senior debt securities. For example, the maturity of the subordinated debt securities would be accelerated only upon insolvency events as specified herein, unless the applicable prospectus supplement says otherwise. There will be no right of acceleration of the payment of principal of the subordinated debt securities upon a default in the payment of principal, interest or any other amount (including upon redemption) on the subordinated debt securities. Therefore, if certain payment defaults occur, holders of senior debt securities may be able to accelerate their securities so that such securities become immediately due and payable while you, as a holder of subordinated debt securities, may not be able to do so. In such an event, our obligation to repay the accelerated securities in full could adversely affect our ability to make timely payments on your securities thereafter.

[Table of Contents](#)

Holders of our senior debt securities issued on or after January 1, 2017 under the 2008 indenture and holders of our subordinated debt securities issued after July 7, 2017 under the subordinated debt indenture could be at greater risk for being structurally subordinated if Group Inc. sells or transfers its assets substantially as an entirety to one or more of its subsidiaries.

With respect to any securities issued on or after January 1, 2017 under the 2008 indenture and any securities issued after July 7, 2017 under the subordinated debt indenture, we may sell or transfer our assets substantially as an entirety, in one or more transactions, to one or more entities, provided that the assets of Group, Inc. and its direct or indirect subsidiaries in which it owns a majority of the combined voting power, taken together, are not sold or transferred substantially as an entirety to one or more entities that are not such subsidiaries. If we sell or transfer our assets substantially as an entirety to our subsidiaries, third-party creditors of our subsidiaries would have additional assets from which to recover on their claims while holders of our securities issued on or after January 1, 2017 under the 2008 indenture and any securities issued after July 7, 2017 under the subordinated debt indenture would be structurally subordinated to creditors of our subsidiaries with respect to such assets.

Please see “Description of Debt Securities We May Offer — Mergers and Similar Transactions” below for more information.

USE OF PROCEEDS

We intend to use the net proceeds from the sales of the securities to provide additional funds for our operations and for other general corporate purposes.

DESCRIPTION OF DEBT SECURITIES WE MAY OFFER

Please note that in this section entitled “Description of Debt Securities We May Offer”, references to “The Goldman Sachs Group, Inc.”, “we”, “our” and “us” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries. Also, in this section, references to “holders” mean those who own debt securities registered in their own names, on the books that we or the trustee maintain for this purpose, and not those who own beneficial interests in debt securities registered in street name or in debt securities issued in book-entry form through one or more depositories. Owners of beneficial interests in the debt securities should read the section below entitled “Legal Ownership and Book-Entry Issuance”.

Debt Securities May Be Senior or Subordinated

We may issue senior or subordinated debt securities. Neither the senior debt securities nor the subordinated debt securities will be secured by any property or assets of The Goldman Sachs Group, Inc. or its subsidiaries. Thus, by owning a debt security, you are one of our unsecured creditors.

The senior debt securities will constitute part of our senior debt, will be issued under one of our senior debt indentures (as described in “— The Senior Debt Indentures and the Subordinated Debt Indenture” below) and will rank equally with all of our other unsecured and unsubordinated debt.

The subordinated debt securities will constitute part of our subordinated debt, will be issued under our subordinated debt indenture described below and will be subordinate in right of payment to all of our “senior debt”, as defined in the subordinated debt indenture. The prospectus supplement for any series of subordinated debt securities or the information incorporated in this prospectus by reference will indicate the approximate amount of senior debt outstanding as of the end of our most recent fiscal year.

None of the indentures limit our ability to incur additional senior debt.

When we refer to “debt securities” in this prospectus, we mean both the senior debt securities and the subordinated debt securities.

The Senior Debt Indentures and the Subordinated Debt Indenture

The senior debt securities are governed by documents called the “senior debt indentures” (the Indenture dated as of May 19, 1999, as amended or supplemented from time to time, between us and The Bank of New York Mellon (formerly known as The Bank of New York), as trustee, which we refer to as the “1999 indenture”, and the Senior Debt Indenture dated as of July 16, 2008, as amended or supplemented from time to time, between us and The Bank of New York Mellon, as trustee, as amended by the Fourth Supplemental Indenture to the 2008 indenture dated as of December 31, 2016 (which, together, we refer to as the “2008 indenture”), and the subordinated debt securities are governed by the “subordinated debt indenture” (the Subordinated Debt Indenture dated as of February 20, 2004 between us and The Bank of New York Mellon, as trustee, and together with the senior debt indentures, the “debt indentures”). The debt indentures are substantially identical, except for our covenant described below under “— Restriction on Liens”, which is included only in the two senior debt indentures; the provisions relating to subordination, which are included only in the subordinated debt indenture; certain provisions described below under “— Modification of the Debt Indentures and Waiver of Covenants”, which vary substantially between the two senior debt indentures; and the provisions relating to events of default and rights and remedies available upon any default or breach, which vary substantially between the two senior debt indentures and between them and the subordinated debt indenture.

Table of Contents

Whether securities have been issued before or after January 1, 2017 under the 2008 indenture or July 7, 2017 under the subordinated debt indenture will be determined by us by reference to the time of the original issuance of the series of which such securities are a part. For this purpose, “series” means securities with the same CUSIP number. Unless otherwise provided in your prospectus supplement, all securities issued under the 2008 indenture on or after January 1, 2017 will be subject to the provisions of the fourth supplemental indenture to the 2008 indenture dated December 31, 2016, and all securities issued under the subordinated debt indenture after July 7, 2017 will be subject to the provisions of the tenth supplemental indenture to the subordinated debt indenture, dated July 7, 2017.

The trustee under each debt indenture has two main roles:

- First, the trustee can enforce your rights against us if we default. There are some limitations on the extent to which the trustee acts on your behalf, which we describe below under “— Default, Remedies and Waiver of Default”.
- Second, the trustee performs administrative duties for us, such as sending you interest payments and notices.

See “— Our Relationship With the Trustee” below for more information about the trustee.

When we refer to the “indenture”, the “debt indenture” or the “trustee” with respect to any debt securities, we mean the debt indenture under which those debt securities are issued and the trustee under that debt indenture.

We May Issue Many Debt Securities or Series of Debt Securities

We may issue many distinct debt securities or series of debt securities under any of our three debt indentures. This section summarizes terms of the debt securities that apply generally to all debt securities and series of debt securities. The provisions of each debt indenture allow us not only to issue debt securities with terms different from those of debt securities previously issued under that debt indenture, but also to “reopen” previously issued debt securities and issue additional debt securities as the same series, with the same CUSIP number, stated maturity, interest payment dates, if any, and other terms, except for the date of issuance and issue price. We will describe the specific terms of your debt securities in the applicable prospectus supplement accompanying this prospectus. Those terms may vary from the terms described here.

As you read this section, please remember that the specific terms of your debt security as described in your prospectus supplement will supplement and, if applicable, may modify or replace the general terms described in this section. If there are any differences between your prospectus supplement and this prospectus, your prospectus supplement will control. Thus, the statements we make in this section may not apply to your debt security.

When we refer to “debt securities” or a “series of debt securities”, we mean, respectively, debt securities or a series of debt securities issued under the applicable debt indenture. When we refer to your prospectus supplement, we mean the prospectus supplement describing the specific terms of the debt security you purchase. The terms used in your prospectus supplement will have the meanings described in this prospectus, unless otherwise specified.

Amounts That We May Issue

None of the debt indentures limits the aggregate amount of debt securities that we may issue or the number of series or the aggregate amount of any particular series of debt securities. We may issue debt securities and other securities at any time without your consent and without notifying you.

Table of Contents

The debt indentures and the debt securities do not limit our ability to incur other indebtedness or to issue other securities. Also, we are not subject to financial or similar restrictions by the terms of the debt securities, except as described below under “— Restriction on Liens”.

Principal Amount, Stated Maturity and Maturity

Unless otherwise stated, the principal amount of a debt security means the principal amount payable at its stated maturity, unless such amount is not determinable, in which case the principal amount of a debt security is its face amount. Any debt securities owned by us or any of our affiliates are not deemed to be outstanding.

The term “stated maturity” with respect to any debt security means the day on which the principal amount of your debt security is scheduled to become due. The principal of your debt security may become due sooner, by reason of redemption or acceleration after a default or otherwise in accordance with the terms of your debt security. The day on which the principal of your debt security actually becomes due, whether at the stated maturity or otherwise, is called the “maturity” of the principal. You will receive the principal amount of your debt security at maturity (plus accrued and unpaid interest, if any), unless your prospectus supplement specifies another amount.

We also use the terms “stated maturity” and “maturity” to refer to the days when other payments become due. For example, we may refer to a regular interest payment date when an installment of interest is scheduled to become due as the “stated maturity” of that installment. When we refer to the “stated maturity” or the “maturity” of a debt security without specifying a particular payment, we mean the stated maturity or maturity, as the case may be, of the principal.

We Are a Holding Company

Because our assets consist principally of interests in the subsidiaries through which we conduct our businesses, our right to participate as an equity holder in any distribution of assets of any of our subsidiaries upon the subsidiary’s liquidation or otherwise, and thus the ability of our security holders to benefit from the distribution, is junior to creditors of the subsidiary, except to the extent that any claims we may have as a creditor of the subsidiary are recognized. Many of our subsidiaries, including our broker-dealer, bank and insurance 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 us. Restrictions or regulatory action of that kind could impede access to funds that we need to make payments on our obligations, including debt obligations. Because some of our subsidiaries, including from time to time some of our principal operating subsidiaries, are partnerships in which we are a general partner or the sole limited partner, we may be liable for their obligations. We also guarantee many of the obligations of our subsidiaries. Any liability we may have for our subsidiaries’ obligations could reduce our assets that are available to satisfy our direct creditors, including investors in our securities.

This Section Is Only a Summary

The debt indentures and their associated documents contain the full legal text of the matters described in this section and in your prospectus supplement. We have filed copies of the debt indentures with the SEC as exhibits to our registration statement, of which this prospectus is a part. See “Available Information” above for information on how to obtain copies of them.

This section and your prospectus supplement summarize all the material terms of the debt indentures, where applicable, and your debt security. They do not, however, describe every aspect of the debt indentures and your debt security. For example, in this section and your prospectus

[Table of Contents](#)

supplement, we use terms that have been given special meaning in the debt indentures, but we describe the meaning for only the more important of those terms. Your prospectus supplement will have a more detailed description of the specific terms of your debt security.

Governing Law

The debt indentures are, and the debt securities will be, governed by New York law.

Currency of Debt Securities

Amounts that become due and payable on your debt security in cash will be payable in a currency, composite currency, basket of currencies or currency unit or units specified in your prospectus supplement. We refer to this currency, composite currency, basket of currencies or currency unit or units as a “specified currency”. The specified currency for your debt security will be U.S. dollars, unless your prospectus supplement states otherwise. Some debt securities may have different specified currencies for principal and interest. You will have to pay for your debt securities by delivering the requisite amount of the specified currency for the principal to GS&Co. or another firm that we name in your prospectus supplement, unless other arrangements have been made between you and us or you and GS&Co. We will make payments on your debt securities in the specified currency, except as described below in “— Payment Mechanics for Debt Securities”. See “Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency” below for more information about risks of investing in debt securities of this kind.

Form of Debt Securities

We will issue each debt security in global — *i.e.*, book-entry — form only, unless we specify otherwise in the applicable prospectus supplement. Debt securities in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the debt securities represented by the global security. Those who own beneficial interests in a global debt security will do so through participants in the depositary’s securities clearing system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We describe book-entry securities below under “Legal Ownership and Book-Entry Issuance”.

In addition, we will generally issue each debt security in registered form, without coupons.

Types of Debt Securities

We may issue any of the three types of senior debt securities or subordinated debt securities described below. A debt security may have elements of each of the three types of debt securities described below. For example, a debt security may bear interest at a fixed rate for some periods and at a floating rate in others. Similarly, a debt security may provide for a payment of principal at maturity linked to an index and also bear interest at a fixed or floating rate.

Fixed Rate Debt Securities

A debt security of this type will bear interest at a fixed rate described in the applicable prospectus supplement. This type includes zero coupon debt securities, which bear no interest and are instead issued at a price lower than the principal amount. See “— Original Issue Discount Debt Securities” below for more information about zero coupon and other original issue discount debt securities.

Each fixed rate debt security, except any zero coupon debt security, will bear interest from its original issue date or from the most recent date to which interest on the debt security has been paid or

Table of Contents

made available for payment. Interest will accrue on the principal of a fixed rate debt security at the fixed rate per annum stated in the applicable prospectus supplement, until the principal is paid or made available for payment or the debt security is converted or exchanged. Interest due on each interest payment date and at maturity will be calculated as described below under “— Calculations of Interest on Debt Securities”. We will pay interest on each interest payment date and at maturity as described below under “— Payment Mechanics for Debt Securities”.

If your debt security is a zero coupon debt security, the applicable prospectus supplement may specify the original issue discount and the information necessary to determine the accreted value. The accreted value will be (1) as of any date prior to the stated maturity, an amount equal to the sum of (A) the original issue price of your debt security and (B) the portion of the excess of the principal amount of your debt security over the original issue price that shall have been accreted from the original issue price on a daily basis and compounded annually on a date specified in the applicable prospectus supplement, up to and including the stated maturity, at a rate that will be specified in the applicable prospectus supplement from the original issue date, computed on the basis of the day count fraction set forth in your prospectus supplement; and (2) as of any date on or after the stated maturity, the principal amount of your debt security.

Floating Rate Debt Securities

A debt security of this type will bear interest at rates that are determined by reference to an interest rate formula. In some cases, the rates may also be adjusted by adding or subtracting a spread or multiplying by a spread multiplier and may be subject to a minimum rate or a maximum rate. The various interest rate formulas and these other features are described below in “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities”. If your debt security is a floating rate debt security, the formula and any adjustments that apply to the interest rate will be specified in your prospectus supplement.

Interest due on each interest payment date and at maturity will be calculated as described below under “— Calculations of Interest on Debt Securities”. We will pay interest on each interest payment date and at maturity as described below under “— Payment Mechanics for Debt Securities”.

Indexed Debt Securities

A debt security of this type provides that the principal amount payable at its maturity, and/or the amount of interest payable on an interest payment date, will be determined by reference to:

- securities of one or more issuers;
- one or more currencies;
- one or more commodities;
- any other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstance;
- one or more indices; and/or
- one or more baskets of the items described above.

An indexed debt security may provide either for cash settlement or for physical settlement by delivery of the underlying security or another property of the type listed above. An indexed debt security may also provide that the form of settlement may be determined at our option or at the holder’s option. Some indexed debt securities may be convertible, exercisable or exchangeable, at our option or the holder’s option, into or for securities of The Goldman Sachs Group, Inc. or an issuer other than The Goldman Sachs Group, Inc.

Table of Contents

An indexed debt security may bear interest at a fixed or floating rate, if specified in your prospectus supplement. Unless otherwise indicated in your prospectus supplement, indexed debt securities that bear interest at a fixed rate will bear interest as described above under “— Fixed Rate Debt Securities” and indexed debt securities that bear interest at a floating rate will bear interest as described above under “— Floating Rate Debt Securities”.

If you purchase an indexed debt security, your prospectus supplement will include information about the relevant index or indices, about how amounts that are to become payable will be determined by reference to the price or value of that index or indices and about the terms on which the security may be settled physically or in cash. Your prospectus supplement will also identify the calculation agent that will calculate the amounts payable with respect to the indexed debt security and will have sole discretion in doing so. The calculation agent may be GS&Co. or another of our affiliates. See “Considerations Relating to Indexed Securities” for more information about risks of investing in debt securities of this type.

Original Issue Discount Debt Securities

A fixed rate debt security, a floating rate debt security or an indexed debt security may be an original issue discount debt security. A debt security of this type is issued at a price lower than its principal amount and may provide that, upon redemption or acceleration of its maturity, an amount less than its principal amount may be payable. An original issue discount debt security may be a zero coupon debt security. A debt security issued at a discount to its principal may, for U.S. federal income tax purposes, be considered an original issue discount debt security, regardless of the amount payable upon redemption or acceleration of maturity. See “United States Taxation — Taxation of Debt Securities — United States Holders — Original Issue Discount” below for a brief description of the U.S. federal income tax consequences of owning an original issue discount debt security.

Information in Your Prospectus Supplement

Your prospectus supplement will describe the specific terms of your debt security, which will include some or all of the following:

- whether it is a senior debt security or a subordinated debt security and, if it is a senior debt security, under which senior debt indenture it will be issued;
- the aggregate principal amount of your debt security or the debt securities of the same series, as applicable;
- the stated maturity;
- the specified currency or currencies for principal and interest and, if the specified currency is not U.S. dollars, certain other terms relating to your debt security;
- the issue price at which we originally issue your debt security, expressed as a percentage of the principal amount, and the original issue date;
- whether your debt security is a fixed rate debt security, a floating rate debt security or an indexed debt security or any combination thereof;
- if your debt security is a fixed rate debt security, a rate per annum at which your debt security will bear interest, if any, the applicable business day convention, the day count convention for computing interest payable for an interest period and the interest payment dates;
- if your debt security is a floating rate debt security, the interest rate basis; any applicable index currency or index maturity, spread or spread multiplier or initial base rate, maximum rate or minimum rate; the interest reset, determination, calculation and payment dates; the day count convention used to calculate interest payments for any period; the business day convention; and the calculation agent;

Table of Contents

- if your debt security is an indexed debt security, the principal amount, if any, we will pay you at maturity, the amount of interest, if any, we will pay you on an interest payment date or the formula we will use to calculate these amounts, if any, and the terms on which your debt security will be exchangeable for or payable in cash, securities or other property;
- if your debt security may be converted into or exercised or exchanged for common stock or preferred stock or other securities of The Goldman Sachs Group, Inc. or debt or equity securities of one or more third parties, the terms on which conversion, exercise or exchange may occur, including whether conversion, exercise or exchange is mandatory, at the option of the holder or at our option, the period during which conversion, exercise or exchange may occur, the initial conversion, exercise or exchange price or rate and the circumstances or manner in which the amount of common stock or preferred stock or other securities issuable upon conversion, exercise or exchange may be adjusted;
- if your debt security is also an original issue discount debt security, the yield to maturity;
- if applicable, the circumstances under which your debt security may be redeemed at our option or repaid at the holder's option before the stated maturity, including any redemption commencement date, repayment date(s), redemption price(s) and redemption period(s);
- the authorized denominations, if other than \$1,000 and integral multiples of \$1,000 in excess thereof;
- the depositary for your debt security, if other than DTC, and any circumstances under which the holder may request securities in non-global form, if we choose not to issue your debt security in book-entry form only;
- if applicable, the circumstances under which we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes and under which we can redeem the debt securities if we have to pay additional amounts;
- the names and duties of any co-trustees, depositaries, authenticating agents, paying agents, transfer agents or registrars for your debt security, as applicable; and
- any other terms of your debt security, which could be different from those described in this prospectus.

Market-Making Transactions. If you purchase your debt security — or any of our other securities we describe in this prospectus — in a market-making transaction, you will receive information about the issue price you pay and your trade and settlement dates in a separate confirmation of sale. A market-making transaction is one in which GS&Co. or another of our affiliates resells a security that it has previously acquired from another holder. A market-making transaction in a particular security occurs after the original issuance and sale of the security. See “Plan of Distribution” below.

Calculations of Interest on Debt Securities

Interest Rates and Interest. Fixed rate debt securities will have the interest rate stated in the applicable prospectus supplement.

For each floating rate debt security, the calculation agent will determine, on the corresponding interest calculation or interest determination date, as described below or in the applicable prospectus supplement, the interest rate that takes effect on each interest reset date. Upon the request of the holder of any floating rate debt security, the calculation agent will provide for that debt security the interest rate then in effect — and, if determined, the interest rate that will become effective on the next interest reset date. The calculation agent's determination of any interest rate, and its calculation of the amount of interest for any interest period, will be final and binding in the absence of manifest error. In

Table of Contents

determining the base rate that applies to a floating rate debt security issued prior to July 1, 2020 during a particular interest period, the calculation agent may obtain rate quotes from various banks or dealers active in the relevant market, as described below or in the applicable prospectus supplement. Those reference banks and dealers may include the calculation agent itself and its affiliates, as well as any underwriter, dealer or agent participating in the distribution of the relevant floating rate debt securities and its affiliates, and they may include affiliates of The Goldman Sachs Group, Inc.

The references below to provisions of the 2006 ISDA Definitions refer to the referenced provisions as published by the International Swaps and Derivatives Association, without regard to any subsequent amendments or supplements (the “2006 ISDA Definitions”).

The calculation agent (in the case of floating rate debt securities) or the paying agent, which may be the indenture trustee (in the case of fixed rate debt securities) will calculate the amount of interest that has accrued during each interest period — *i.e.*, the period from and including the original issue date, or the last date to which interest has been paid (which may be an interest payment date, depending on the business day convention that applies to your debt securities), to but excluding the next date to which interest will be paid (which may be an interest payment date, depending on the business day convention that applies to your debt securities, as described under “— Business Day Conventions” below). For each interest period, the agent will calculate the amount of accrued interest by multiplying the principal amount or face amount of the debt security, as applicable, by an accrued interest factor for the interest period. The accrued interest factor will be determined by multiplying the per annum fixed rate or floating rate, as applicable, by a factor resulting from the day count convention specified below or in your prospectus supplement, which may include the following:

- If “1/1 (ISDA)” or “1/1” is specified, the factor will be equal to 1, as described in Section 4.16(a) of the 2006 ISDA Definitions.
- If “Actual/Actual”, “Actual/Actual (ISDA)”, “Act/Act” or “Act/Act (ISDA)” is specified, the factor will be equal to the actual number of days in the interest period divided by 365 (or, if any portion of that interest period falls in a leap year, the sum of (1) the actual number of days in that portion of the interest period falling in a leap year divided by 366 and (2) the actual number of days in that portion of the interest period falling in a non-leap year divided by 365), as described in Section 4.16(b) of the 2006 ISDA Definitions.
- If “Actual/Actual (ICMA)” or “Act/Act (ICMA)” is specified, the factor will be equal to the number of days in the interest period, including February 29 in a leap year, divided by the product of (1) the actual number of days in such interest period and (2) the number of interest periods in the year, as described in Section 4.16(c) of the 2006 ISDA Definitions.
- If “Actual/365 (Fixed)”, “Act/365 (Fixed)”, “A/365 (Fixed)” or “A/365F” is specified, the factor will be equal to the actual number of days in the interest period divided by 365, as described in Section 4.16(d) of the 2006 ISDA Definitions.
- If “Actual/360 (ISDA)”, “Act/360 (ISDA)”, “A/360 (ISDA)”, “Actual/360”, “Act/360” or “A/360” is specified, the factor will be equal to the actual number of days in the interest period divided by 360, as described in Section 4.16(e) of the 2006 ISDA Definitions.
- If “30/360 (ISDA)”, “360/360 (ISDA)”, “Bond Basis (ISDA)”, “30/360”, “360/360” or “Bond Basis” is specified, the factor will be equal to the number of days in the interest period in respect of which payment is being made divided by 360, calculated on a formula basis as follows, as described in Section 4.16(f) of the 2006 ISDA Definitions:

$$\frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

[Table of Contents](#)

where:

- “Y1” is the year, expressed as a number, in which the first day of the interest period falls;
- “Y2” is the year, expressed as a number, in which the day immediately following the last day included in the interest period falls;
- “M1” is the calendar month, expressed as a number, in which the first day of the interest period falls;
- M2” is the calendar month, expressed as a number, in which the day immediately following the last day included in the interest period falls;
- “D1” is the first calendar day, expressed as a number, of the interest period, unless such number would be 31, in which case D1 will be 30; and
- “D2” is the calendar day, expressed as a number, immediately following the last day included in the interest period, unless such number would be 31 and D1 is greater than 29, in which case D2 will be 30.
- If “30E/360” or “Eurobond Basis” is specified, the factor will be equal to the number of days in the interest period in respect of which payment is being made divided by 360, calculated on a formula basis as follows, as described in Section 4.16(g) of the 2006 ISDA Definitions:

$$\frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

where:

- “Y1” is the year, expressed as a number, in which the first day of the interest period falls;
- Y2” is the year, expressed as a number, in which the day immediately following the last day included in the interest period falls;
- “M1” is the calendar month, expressed as a number, in which the first day of the interest period falls;
- “M2” is the calendar month, expressed as a number, in which the day immediately following the last day included in the interest period falls;
- “D1” is the first calendar day, expressed as a number, of the interest period, unless such number would be 31, in which case D1 will be 30; and
- “D2” is the calendar day, expressed as a number, immediately following the last day included in the interest period, unless such number would be 31, in which case D2 will be 30.
- If “30E/360 (ISDA)” is specified, the factor will be equal to the number of days in the interest period in respect of which payment is being made divided by 360, calculated on a formula basis as follows, as described in Section 4.16(h) of the 2006 ISDA Definitions:

$$\frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

where:

- “Y1” is the year, expressed as a number, in which the first day of the interest period falls;
- “Y2” is the year, expressed as a number, in which the day immediately following the last day included in the interest period falls;

Table of Contents

“M1” is the calendar month, expressed as a number, in which the first day of the interest period falls;

“M2” is the calendar month, expressed as a number, in which the day immediately following the last day included in the interest period falls;

“D1” is the first calendar day, expressed as a number, of the interest period, unless (i) that day is the last day of February or (ii) such number would be 31, in which cases D1 will be 30; and

“D2” is the calendar day, expressed as a number, immediately following the last day included in the interest period, unless (i) that day is the last day of February, but not the stated maturity date or (ii) such number would be 31, in which cases D2 will be 30.

All percentages resulting from any calculation relating to any debt security will be rounded upward or downward, as appropriate, to the next higher or lower one hundred-thousandth of a percentage point, e.g., 9.876541% (or .09876541) being rounded down to 9.87654% (or .0987654) and 9.876545% (or .09876545) being rounded up to 9.87655% (or .0987655). All amounts used in or resulting from any calculation relating to any debt security will be rounded upward or downward, as appropriate, to the nearest cent, in the case of U.S. dollars, or to the nearest corresponding hundredth of a unit, in the case of a currency other than U.S. dollars, with one-half cent or one-half of a corresponding hundredth of a unit or more being rounded upward.

Interest Reset Dates and Determining the New Rate. The rate of interest on floating rate debt securities will be reset daily, weekly, monthly, quarterly, semi-annually or annually, depending on your rate and the terms of your debt security. The date on which the interest rate resets and the new interest rate becomes effective is called the interest reset date. Interest reset dates are subject to adjustment, as described below under “— Business Day Conventions”.

The interest rate that takes effect on a particular interest reset date will be determined by the calculation agent for certain base rates by reference to a particular date called an interest determination date and, other than the CORRA (Index) debt securities or CORRA (Daily) debt securities, in any event, no later than the business day prior to the interest reset date. The calculation agent need not wait until the business day prior to the reset date to determine the interest rate if the rate information it needs to make the determination is available from the relevant sources sooner. The base rate in effect from and including the original issue date to but excluding the first interest reset date (“the initial interest period”) will be the initial base rate, which will be specified in your prospectus supplement. For floating rate debt securities that reset daily or weekly, the base rate in effect for each day following the fifth business day before an interest payment date to, but excluding, the interest payment date, and for each day following the fifth business day before the maturity to, but excluding, the maturity, will be the base rate in effect on that fifth business day.

Interest Payment Dates. Subject to any applicable business day convention as described under “— Business Day Conventions” below, interest on your debt securities will be paid on the interest payment dates. The interest payment dates will be specified in your prospectus supplement. If debt securities are originally issued after the regular record date and before the date that would otherwise be the first interest payment date, the first interest payment date will be the date that would otherwise be the second interest payment date. We have defined the term “regular record date” under “— Payment Mechanics for Debt Securities”.

Table of Contents

Business Day Conventions. If your prospectus supplement specifies that one of the following business day conventions is applicable to your debt security, the interest payment dates, interest reset dates and interest periods for your debt securities will be affected (and, consequently, may be adjusted) as described below, except that any payment due at maturity (including any interest payment) will not be affected as described below:

- ***“Following business day convention”*** means, for any relevant date other than the maturity, if such date would otherwise fall on a day that is not a business day, then such date will be postponed to the next day that is a business day.
- ***“Modified following business day convention”*** means, for any relevant date other than the maturity, if such date would otherwise fall on a day that is not a business day, then such date will be postponed to the next day that is a business day, except that, if the next business day falls in the next calendar month, then such date will be advanced to the immediately preceding day that is a business day.
- ***“Following unadjusted business day convention”*** means, for any interest payment date, other than the maturity, that falls on a day that is not a business day, any payment due on such interest payment date will be postponed to the next day that is a business day; provided that interest due with respect to such interest payment date shall not accrue from and including such interest payment date to and including the date of payment of such interest as so postponed. Interest reset dates and interest periods also are not adjusted for non-business days.
- ***“Modified following unadjusted business day convention”*** means, for any interest payment date, other than the maturity, that falls on a day that is not a business day, any payment due on such interest payment date will be postponed to the next day that is a business day; *provided* that interest due with respect to such interest payment date shall not accrue from and including such interest payment date to and including the date of payment of such interest as so postponed, and *provided further* that, if such day would fall in the next succeeding calendar month, the date of payment with respect to such interest payment date will be advanced to the business day immediately preceding such interest payment date. Interest reset dates and interest periods also are not adjusted for non-business days.

In all cases, if the stated maturity or any earlier redemption date or repayment date with respect to any debt security falls on a day that is not a business day, any payment of principal, premium, if any, and interest otherwise due on such day will be made on the next succeeding business day, and no interest on such payment shall accrue for the period from and after such stated maturity, redemption date or repayment date, as the case may be.

Business Days. One or more of the following business day definitions may apply to any debt security, as specified in your prospectus supplement:

“Bank of Canada business day” means each day that Schedule I banks under the Bank Act (Canada) are open for business in Toronto, Ontario, Canada, other than a Saturday or a Sunday or a public holiday in Toronto (or such revised regular publication calendar for CORRA, CORRA Compounded Index or an Applicable CORRA Fallback Rate as may be adopted by the CORRA Reference Rate Administrator from time to time (each as defined below in the sections entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities —CORRA (Index)” and “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities —CORRA (Daily)”, as applicable).

“Euro business day” means each Monday, Tuesday, Wednesday, Thursday and Friday on which the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET) System, or any successor system, is open for business.

[Table of Contents](#)

“London business day” means each Monday, Tuesday, Wednesday, Thursday and Friday that is not a day on which banking institutions in London generally are authorized or obligated by law, regulation or executive order to close and, in the case of any debt security for which LIBOR is an interest rate basis, is also a day on which dealings in the applicable index currency are transacted in the London interbank market.

“New York City banking day” means any day on which commercial banks are open for general business (including dealings in foreign exchange and foreign currency deposits) in New York City.

“U.S. government securities business day” means any day other than a Saturday, a Sunday or a day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.

Additional business days or alternative business day definitions not specified above may apply to any debt security and, if applicable, will be described in your prospectus supplement.

Floating Rate Debt Securities.

*In this subsection, we use several specialized terms relating to the manner in which floating interest rates are calculated. These terms appear in **bold, italicized** type the first time they appear, and we define these terms in “— Special Rate Calculation Terms” below.*

Base Rates. We currently expect to issue floating rate debt securities that bear interest at rates based on one or more of the following base rates.

- CMS rate;
- CMT rate;
- CORRA (Daily);
- CORRA (Index);
- federal funds rate;
- SOFR; and/or
- treasury rate.

We describe each of these base rates in further detail below in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities”. If you purchase floating rate debt securities, your prospectus supplement will specify the type of base rate that applies to your debt securities and whether your debt securities are subject to a spread, spread multiplier, minimum rate or maximum rate.

Day Count Convention. Unless otherwise specified in your prospectus supplement, federal funds rate debt securities, LIBOR debt securities, SOFR debt securities and prime rate debt securities will be subject to the Actual/360 (ISDA) day count convention, CMS rate debt securities, CMT rate debt securities and treasury rate debt securities will be subject to the Actual/Actual (ISDA) day count convention, and CORRA (Index) debt securities and CORRA (Daily) debt securities will be subject to the Actual/365 (Fixed) day count convention, as described above under “— Interest Rates and Interest”.

Initial Base Rate. Unless otherwise specified in your prospectus supplement, for floating rate debt securities other than SOFR debt securities, CORRA (Index) debt securities and CORRA (Daily) debt

[Table of Contents](#)

securities, the initial base rate will be the applicable base rate in effect from and including the original issue date to but excluding the initial interest reset date. We will specify the initial base rate in your prospectus supplement.

Spread or Spread Multiplier. In some cases, the base rate for floating rate debt securities may be adjusted:

- by adding or subtracting a specified number of basis points, called the spread, with one basis point being 0.01%;
- by multiplying the base rate by a specified percentage, called the spread multiplier; or
- by a combination of the foregoing.

If you purchase floating rate debt securities, your prospectus supplement will specify whether a spread or spread multiplier will apply to your debt securities and, if so, the amount of the applicable spread or spread multiplier.

Maximum and Minimum Rates. The actual interest rate, after being adjusted by the spread or spread multiplier, may also be subject to either or both of the following limits:

- a maximum rate — i.e., a specified upper limit that the actual interest rate in effect at any time may not exceed; and/or
- a minimum rate — i.e., a specified lower limit that the actual interest rate in effect at any time may not fall below.

If you purchase floating rate debt securities, your prospectus supplement will specify whether a maximum rate and/or minimum rate will apply to your debt securities and, if so, what those rates are.

Whether or not a maximum rate applies, the interest rate on floating rate debt securities will in no event be higher than the maximum rate permitted by New York law, as it may be modified by U.S. law of general application. Under current New York law, the maximum rate of interest, with some exceptions, for any loan in an amount less than \$250,000 is 16% and for any loan in the amount of \$250,000 or more but less than \$2,500,000 is 25%, per year on a simple interest basis. These limits do not apply to loans of \$2,500,000 or more.

Interest Determination Dates. The interest rate that takes effect on an interest reset date will be determined by the calculation agent for certain base rates by reference to a particular date called an interest determination date for floating rate debt securities other than SOFR debt securities, CORRA (Index) debt securities or CORRA (Daily) debt securities. Except as otherwise specified in your prospectus supplement:

- For CMS rate debt securities and CMT rate debt securities, the interest determination date relating to a particular interest reset date will be the second U.S. Government securities business day preceding the interest reset date.
- For LIBOR debt securities, the interest determination date relating to a particular interest reset date will be the second London business day preceding the interest reset date, unless the **index currency** is pounds sterling, in which case the interest determination date will be the interest reset date. We refer to an interest determination date for LIBOR debt securities as a LIBOR interest determination date.
- For EURIBOR debt securities, the interest determination date relating to a particular interest reset date will be the second euro business day preceding the interest reset date. We refer to an interest determination date for EURIBOR debt securities as a EURIBOR interest determination date.

[Table of Contents](#)

Sources and Corrections. If we refer to a rate as set forth on a display page, other published source, information vendor or other vendor officially designated by the sponsor of that rate, if there is a successor source for the display page, other published source, information vendor or other official vendor, we refer to that successor source as applicable as determined by the calculation agent. When we refer to a particular heading or headings on any of those sources, those references include any successor or replacement heading or headings as determined by the calculation agent.

If the applicable rate is based on information obtained from a Refinitiv page, that rate will be subject to the corrections, if any, published on that Refinitiv page within one hour of the time that rate was first displayed on such source. If the applicable rate is based on information obtained from H.15 Daily Update, that rate will be subject to the corrections, if any, published by that source within 30 days of the day that rate was first published in that source.

CMS Rate.

Floating Rate Debt Securities Issued on or after July 1, 2020

For floating rate debt securities issued on or after July 1, 2020 for which the base rate is CMS rate, unless otherwise specified in your prospectus supplement, the CMS rate will be the offered rate appearing on the Refinitiv page ICESWAP1 for U.S. dollar swaps having a maturity equal to the **index maturity** specified in your prospectus supplement as of approximately 11:00 A.M., New York City time, on the relevant interest determination date. If the CMS rate cannot be determined as described above, the following procedures will apply in determining the CMS rate:

If the calculation agent determines on the relevant interest determination date that the CMS rate has been discontinued, then the calculation agent will use a substitute or successor rate that it has determined in its sole discretion is most comparable to the CMS rate, provided that if the calculation agent determines there is an industry-accepted successor rate, then the calculation agent shall use such successor rate. If the calculation agent has determined a substitute or successor rate in accordance with the foregoing, the calculation agent in its sole discretion may determine the definition of business day and the relevant interest determination date to be used, and any other relevant methodology for calculating such substitute or successor rate, including any adjustment factor needed to make such substitute or successor rate comparable to the CMS rate, in a manner that is consistent with any industry-accepted practices for such substitute or successor rate.

Unless the calculation agent uses a substitute or successor rate as so provided, if the CMS rate cannot be determined in the manner described above on the interest determination date, the CMS rate will be determined by the calculation agent, after consulting such sources as it deems comparable to the foregoing display page, or any other source it deems reasonable, in its sole discretion.

Floating Rate Debt Securities Issued prior to July 1, 2020

For floating rate debt securities issued prior to July 1, 2020 for which the base rate is CMS rate, unless otherwise specified in your prospectus supplement, the CMS rate for the relevant interest reset date will be the rate appearing on the Refinitiv page ICESWAP1 for U.S. dollar swaps having a maturity equal to the index maturity specified in your prospectus supplement as of approximately 11:00 A.M., New York City time, on the relevant interest determination date. If the CMS rate cannot be determined in this manner, then:

The CMS rate for the relevant interest reset date will be determined on the basis of the mid-market semi-annual swap rate quotations provided by five leading swap dealers in the New York City interbank market at approximately 11:00 A.M., New York City time, on the relevant interest

[Table of Contents](#)

determination date. For this purpose, the semi-annual swap rate means the mean of the bid and offered rates for the semi-annual fixed leg, calculated on a 30/360 (ISDA) day count basis, of a fixed-for-floating U.S. dollar interest rate swap transaction with a term equal to the specified index maturity, commencing on the relevant interest reset date, with an acknowledged dealer of good credit in the swap market, where the floating leg, calculated on an Actual/360 (ISDA) day count basis, is equivalent to LIBOR with a designated maturity of three months, as such rate may be determined in accordance with the provisions set forth below under “— LIBOR”. The calculation agent will select the five swap dealers in its sole discretion and will request the principal New York City office of each of those dealers to provide a quotation of its rate.

If at least three quotations are provided, the CMS rate for that interest reset date will be the arithmetic mean of the quotations described above, eliminating the highest and lowest quotations or, in the event of equality, one of the highest and one of the lowest quotations.

If fewer than three quotations are provided, the calculation agent will determine the CMS rate in its sole discretion.

CMT Rate.

Floating Rate Debt Securities Issued on or after July 1, 2020

For floating rate debt securities issued on or after July 1, 2020 for which the base rate is CMT rate, unless otherwise specified in your prospectus supplement, the manner in which the CMT rate is determined for the relevant interest reset date will depend on the **designated CMT Refinitiv page** that is specified for the debt in the applicable prospectus supplement. If no designated CMT Refinitiv page is specified, Refinitiv page FRBCMT will be the designated CMT Refinitiv page for the debt securities.

If the designated CMT Refinitiv page for your floating rate debt securities is FRBCMT, the CMT rate for the relevant interest reset date will be the yield for Treasury securities at “constant maturity” for a period of the **designated CMT index maturity** as published by the Federal Reserve System Board of Governors, or its successor, on its website or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, as such yield is displayed on the designated CMT Refinitiv page on the interest determination date. If the applicable rate described above is not displayed on the designated CMT Refinitiv page, then the CMT rate will be the Treasury constant maturity rate for the designated CMT index maturity as published by the Federal Reserve System Board of Governors, or its successor, on its website or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion.

If the rate described in the preceding paragraph does not appear on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, then the CMT rate for the relevant interest reset date will be the Treasury constant maturity rate for the designated CMT index maturity that:

- is published by the Board of Governors of the Federal Reserve System or the U.S. Department of the Treasury; and
- is determined by the calculation agent to be comparable to the applicable rate that would otherwise have been published on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion.

If, on the relevant interest determination date, the Board of Governors of the Federal Reserve System or the U.S. Department of the Treasury does not publish a yield on Treasury securities at

Table of Contents

“constant maturity” for the designated CMT index maturity, after consulting such sources as it deems comparable to any of the foregoing display pages, or any such source as it deems reasonable from which to estimate the CMT rate, the calculation agent shall determine the CMT rate in its sole discretion, provided that if the calculation agent determines there is an industry-accepted successor CMT rate, then the calculation agent shall use such successor rate. If the calculation agent has determined a substitute or successor rate in accordance with the foregoing, the calculation agent in its sole discretion may determine the business day convention, the definition of business day and the interest determination date to be used and any other relevant methodology for calculating such substitute or successor rate, including any adjustment factor needed to make such substitute or successor rate comparable to the CMT rate, in a manner that is consistent with any industry-accepted practices for such substitute or successor rate.

If the designated CMT Refinitiv page for the floating rate debt securities issued on or after July 1, 2020 is FEDCMT, the CMT rate for the relevant interest reset date will be the average of the yields for the five business days for Treasury securities at “constant maturity” for a period of the designated CMT index maturity as set forth on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, as such yields are displayed on the designated CMT Refinitiv page on the relevant interest reset date.

If the applicable average described above is not displayed on the designated CMT Refinitiv page, then the CMT rate for the relevant interest reset date will be the average of the yields for the five business days for Treasury securities at “constant maturity” for a period of the relevant index maturity and for the five business days preceding the relevant interest reset date as published on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion.

If the applicable average described in the preceding paragraph does not appear on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, then the CMT rate for the relevant interest reset date will be the average of the five business days for Treasury securities at “constant maturity” for a period equal to the designated CMT index maturity as otherwise announced by the Federal Reserve Bank of New York the five business days preceding the relevant interest reset date.

If, on the relevant interest determination date, the Board of Governors of the Federal Reserve System or the U.S. Department of the Treasury does not publish a yield on Treasury securities at “constant maturity” for the designated CMT index maturity, after consulting such sources as it deems comparable to any of the foregoing display pages, or any such source as it deems reasonable from which to estimate the CMT rate, the calculation agent shall determine the CMT rate in its sole discretion, provided that if the calculation agent determines there is an industry-accepted successor CMT rate, then the calculation agent shall use such successor rate. If the calculation agent has determined a substitute or successor rate in accordance with the foregoing, the calculation agent in its sole discretion may determine the business day convention, the definition of business day and the interest determination date to be used and any other relevant methodology for calculating such substitute or successor rate, including any adjustment factor needed to make such substitute or successor rate comparable to the CMT rate, in a manner that is consistent with any industry-accepted practices for such substitute or successor rate.

Floating Rate Debt Securities Issued Prior to July 1, 2020

For floating rate debt securities issued prior to July 1, 2020 for which the base rate is CMT rate, unless otherwise specified in your prospectus supplement, the manner in which the CMT rate is

Table of Contents

determined for the relevant interest reset date will depend on the designated CMT Refinitiv page that is specified for the floating rate debt securities in the applicable prospectus supplement. If no designated CMT Refinitiv page is specified, Refinitiv page FRBCMT will be the designated CMT Refinitiv page for the floating rate debt securities.

If the designated CMT Refinitiv page for the floating rate debt securities is FRBCMT, the CMT rate for the relevant interest reset date will be the yield for Treasury securities at “constant maturity” for a period of the designated CMT index maturity as published by the Federal Reserve System Board of Governors, or its successor, on its website or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, as such yield is displayed on the designated CMT Refinitiv page on the interest determination date. If the applicable rate described above is not displayed on the designated CMT Refinitiv page, then the CMT rate will be the Treasury constant maturity rate for the designated CMT index maturity as published by the Federal Reserve System Board of Governors, or its successor, on its website or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion.

If the rate described in the preceding paragraph does not appear on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, then the CMT rate for the relevant interest reset date will be the Treasury constant maturity rate for the designated CMT index maturity that:

- is published by the Board of Governors of the Federal Reserve System or the U.S. Department of the Treasury; and
- is determined by the calculation agent to be comparable to the applicable rate that would otherwise have been published on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion.

If, on the relevant interest determination date, the rate described in the preceding paragraph is not published by the Board of Governors of the Federal Reserve System or the U.S. Department of Treasury, then the CMT rate for the relevant interest reset date will be the yield to maturity of the arithmetic mean of the secondary market bid rates for the most recently issued U.S. Treasury securities having an original maturity of approximately the designated CMT index maturity and a remaining term to maturity of not less than the designated CMT index maturity *minus* one year, and in a **representative amount**, as of approximately 3:30 P.M., New York City time, on the relevant interest determination date, quoted by three primary U.S. government securities dealers in New York City selected by the calculation agent. In selecting these bid rates, the calculation agent will request quotations from five primary dealers and will disregard the highest quotation — or, if there is equality, one of the highest — and the lowest quotation — or, if there is equality, one of the lowest. If fewer than five but more than two such bid rates are provided, the CMT rate will be based on the arithmetic mean of the bid prices provided, and neither the highest nor lowest of such quotations will be eliminated.

If the calculation agent is unable to obtain three quotations of the kind described in the preceding paragraph, the CMT rate for the relevant interest reset date will be the yield to maturity of the arithmetic mean of the secondary market bid rates for U.S. Treasury securities with an original maturity longer than the designated CMT index maturity, with a remaining term to maturity closest to the designated CMT index maturity and in a representative amount, as of approximately 3:30 P.M., New York City time, on the relevant CMT interest determination date, of three primary U.S. government securities dealers in New York City selected by the calculation agent. In selecting these bid rates, the calculation agent will request quotations from five of these primary dealers and will disregard the highest quotation — or, if there is equality, one of the highest — and the lowest quotation — or, if there is equality, one of the lowest. If fewer than five but more than two of these primary dealers are quoting,

Table of Contents

then the CMT rate for the relevant interest reset date will be based on the arithmetic mean of the bid rates so obtained, and neither the highest nor the lowest of those quotations will be disregarded. If two U.S. Treasury securities with an original maturity longer than the designated CMT index maturity have remaining terms to maturity that are equally close to the designated CMT index maturity, the calculation agent will obtain quotations for the U.S. Treasury securities with the shorter original term to maturity.

If two or fewer primary dealers selected by the calculation agent are quoting as described in the preceding paragraph, the CMT rate for the relevant interest reset date will be the rate determined by the calculation agent in its sole discretion, after consulting such sources as it deems comparable to any of the foregoing quotations or display page, or any such source as it deems reasonable from which to estimate the rate for U.S. Treasury securities at constant maturity or any of the foregoing bid rates.

If the designated CMT Refinitiv page for the floating rate debt securities issued prior to July 1, 2020 is FEDCMT, the CMT rate for the relevant interest reset date will be the one-week average yield for Treasury securities at “constant maturity” for a period of the designated CMT index maturity as set forth on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, as such yields are displayed on the designated CMT Refinitiv page on the relevant interest reset date.

If the applicable average described above is not displayed on the designated CMT Refinitiv page, then the CMT rate for the relevant interest reset date will be the one-week average yield for Treasury securities at “constant maturity” for a period of the designated CMT index maturity and for the week preceding the relevant interest reset date as published on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion.

If the applicable average described in the preceding paragraph does not appear on the website of the Federal Reserve System Board of Governors or in another recognized electronic source, in each case as determined by the calculation agent in its sole discretion, then the CMT rate for the relevant interest reset date will be the one-week average yield for Treasury securities at “constant maturity” for a period equal to the designated CMT index maturity as otherwise announced by the Federal Reserve Bank of New York for the week preceding the relevant interest reset date.

If for the week preceding the relevant interest reset date the Federal Reserve Bank of New York does not publish a one-week average yield for Treasury securities at “constant maturity” for a period equal to the designated CMT index maturity for the preceding week, then the CMT rate for the relevant interest reset date will be the yield to maturity of the arithmetic mean of the secondary market bid rates for the most recently issued U.S. Treasury securities having an original maturity of approximately the designated CMT index maturity and a remaining term to maturity of not less than the designated CMT index maturity *minus* one year, and in a representative amount, as of approximately 3:30 P.M., New York City time, on the relevant CMT interest determination date, quoted by three primary U.S. government securities dealers in New York City selected by the calculation agent. In selecting these bid rates, the calculation agent will request quotations from five primary dealers and will disregard the highest quotation — or, if there is equality, one of the highest — and the lowest quotation — or, if there is equality, one of the lowest. If fewer than five but more than two such bid rates are provided, the CMT rate will be based on the arithmetic mean of the bid prices provided, and neither the highest nor lowest of such quotations will be eliminated.

If the calculation agent is unable to obtain three quotations of the kind described in the preceding paragraph, the CMT rate for the relevant interest reset date will be the yield to maturity of the arithmetic mean of the secondary market bid rates for U.S. Treasury securities with an original maturity

Table of Contents

longer than the designated CMT index maturity, with a remaining term to maturity closest to the designated CMT index maturity and in a representative amount, as of approximately 3:30 P.M., New York City time, on the relevant CMT interest determination date, of three primary U.S. government securities dealers in New York City selected by the calculation agent. In selecting these bid rates, the calculation agent will request quotations from five of these primary dealers and will disregard the highest quotation — or, if there is equality, one of the highest — and the lowest quotation — or, if there is equality, one of the lowest. If fewer than five but more than two of these primary dealers are quoting, then the CMT rate for the relevant interest reset date will be based on the arithmetic mean of the bid rates so obtained, and neither the highest nor the lowest of those quotations will be disregarded. If two U.S. Treasury securities with an original maturity longer than the designated CMT index maturity have remaining terms to maturity that are equally close to the designated CMT index maturity, the calculation agent will obtain quotations for the U.S. Treasury securities with the shorter original term to maturity.

If two or fewer primary dealers selected by the calculation agent are quoting as described in the preceding paragraph, the CMT rate for the relevant interest reset date will be the rate determined by the calculation agent in its sole discretion, after consulting such sources as it deems comparable to any the foregoing quotations or display page, or any such source as it deems reasonable from which to estimate of the one-week average for U.S. Treasury securities at constant maturity or any of the foregoing bid rates.

CORRA (Daily). For floating rate debt securities for which the base rate is compounded CORRA (Daily), compounded CORRA will be determined by the calculation agent using the formula described below, unless otherwise specified in your prospectus supplement.

As used in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — CORRA (Daily)”, CORRA means, with respect to any Bank of Canada business day, a reference rate equal to the daily Canadian Overnight Repo Rate Average for that day, as published by the CORRA Reference Rate Administrator on the website of the CORRA Reference Rate Administrator or any successor website on the immediately following Bank of Canada business day.

Compounded CORRA, for any observation period, is a rate of return of a daily compounded interest investment calculated in accordance with the formula below, with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point (0.00000005 being rounded upwards)

$$\text{Compounded CORRA} = \left(\prod_{i=1}^{d_o} \left(1 + \frac{\text{CORRA}_i \times n_i}{365} \right) - 1 \right) \times \frac{365}{d}$$

Where for purposes of applying the above formula to the terms of the debt securities:

“CORRA_i”, for any Bank of Canada business day “i” in the relevant observation period, is equal to the daily CORRA rate in respect of that day as published by the CORRA Reference Rate Administrator on the website of the CORRA Reference Rate Administrator or any successor website on the immediately following Bank of Canada business day, which is Bank of Canada business day “i” + 1, provided that if by not later than 11:00 a.m. Toronto time (or the amended publication deadline for CORRA, if any, specified by the CORRA Reference Rate Administrator) neither the CORRA Reference Rate Administrator nor authorized distributors provide or publish CORRA in respect of that day and a CORRA Cessation Effective Date has not occurred, then, references to CORRA will be deemed to be references to the last provided or published CORRA;

Table of Contents

“ n_i ”, for any Bank of Canada business day “ i ” in the relevant observation period, is the number of calendar days from, and including such Bank of Canada business day “ i ” to, but excluding, the following Bank of Canada business day, which is Bank of Canada business day “ i ” + 1;

“ d ” is the number of calendar days in the relevant observation period;

“ d_0 ” for any observation period, is the number of Bank of Canada business days in the relevant observation period; and

“ i ” is a series of whole numbers from one to d_0 , each representing the relevant Bank of Canada business day in chronological order from, and including, the first Bank of Canada business day in the relevant observation period.

Notwithstanding the foregoing, if the calculation agent determines that a CORRA Cessation Event has occurred, the terms and provisions set forth in (i) through (ii) below will apply, in the order set forth below. Notwithstanding (i) through (ii) below, in connection with the implementation of an Applicable CORRA Fallback Rate, the calculation agent may make such changes or adjustments to (1) the Applicable CORRA Fallback Rate or the spread thereon, (2) any interest reset date, interest determination date, interest payment date, other relevant date, business day convention or interest period, (3) the manner, timing and frequency of determining rates and amounts of interest that are payable on the debt securities and the conventions relating to such determination, (4) the timing and frequency of making payments of interest, (5) rounding conventions, (6) tenors, and (7) any other terms or provisions of the debt securities and related definitions, in each case that the calculation agent determines, from time to time, are consistent with accepted market practice or applicable regulatory or legislative action or guidance for the use of such Applicable CORRA Fallback Rate for debt obligations comparable to the debt securities in such circumstances.

(i) CORRA Cessation Effective Date with respect to CORRA. If the calculation agent determines that a CORRA Cessation Event has occurred, then the rate for an interest determination date which occurs on or after the CORRA Cessation Effective Date with respect to compounded CORRA will be the CAD Recommended Rate, to which the calculation agent shall apply the most recently published spread, as at the CORRA Cessation Effective Date with respect to compounded CORRA after making such adjustments to the CAD Recommended Rate as the calculation agent determines to be necessary to account for any difference in term, structure or tenor of the CAD Recommended Rate by comparison to compounded CORRA. If there is a CAD Recommended Rate before the end of the first Bank of Canada business day following the CORRA Cessation Effective Date with respect to compounded CORRA, but neither the administrator nor authorized distributors provide or publish the CAD Recommended Rate and a Fallback Index Cessation Effective Date with respect to it has not occurred, then, in respect of any day for which the CAD Recommended Rate is required, references to the CAD Recommended Rate will be deemed to be references to the last provided or published CAD Recommended Rate.

(ii) No CAD Recommended Rate or Fallback Index Cessation Effective Date with respect to CAD Recommended Rate. If there is no CAD Recommended Rate before the end of the first Bank of Canada business day following a CORRA Cessation Effective Date with respect to compounded CORRA; or there is a CAD Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, then the rate for an interest determination date which occurs on or after the CORRA Cessation Effective Date with respect to compounded CORRA or the Fallback Index Cessation Effective Date with respect to the CAD Recommended Rate (as applicable) will be the BOC Target Rate, to which the calculation agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to compounded CORRA, after making such adjustments to the BOC Target Rate as the calculation agent determined to be necessary to account for any difference in term, structure or tenor of the BOC Target Rate by comparison to compounded

Table of Contents

CORRA. If neither the administrator nor authorized distributors provide or publish the BOC Target Rate and a Fallback Index Cessation Effective Date with respect to the BOC Target Rate has not occurred, then, in respect of any day for which the BOC Target Rate is required, references to the BOC Target Rate will be deemed to be references to the last provided or published BOC Target Rate.

Any determination, decision or election that may be made by the calculation agent pursuant to the provisions described in this “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — CORRA (Daily)”, including any determination with respect to a rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error, may be made in the calculation agent’s sole discretion, and, notwithstanding anything to the contrary in the documentation relating to the debt securities, shall become effective without consent from any other party. The calculation agent’s determination of any interest rate, and its calculation of the amount of interest for any observation period or interest period, will be on file at our principal offices and will be made available to any holder of debt securities upon request.

All Canadian dollar amounts resulting from the calculation of interest, as described above during the relevant periods, will be rounded to the nearest cent.

As used in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — CORRA (Daily)”:

The term “Applicable CORRA Fallback Rate” means one of the CAD Recommended Rate or the BOC Target Rate, as applicable.

The term “BOC Target Rate” means the Bank of Canada’s Target for the Overnight Rate as set by the Bank of Canada and published on the Bank of Canada’s website.

The term “CAD Recommended Rate” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for CORRA by a committee officially endorsed or convened by the Bank of Canada for the purpose of recommending a replacement for CORRA (which rate may be produced by the Bank of Canada or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

The term “CORRA Cessation Effective Date” means, in respect of one or more CORRA Cessation Events, the first date on which CORRA is no longer provided. If CORRA ceases to be provided on the same day that it is required to determine the rate for an interest period but it was provided on the interest determination date for such interest period, then the CORRA Cessation Effective Date will be the next day on which the rate would ordinarily have been published.

The term “CORRA Cessation Event” means:

- (1) a public statement or publication of information by or on behalf of the administrator of CORRA announcing that it has ceased or will cease to provide CORRA permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide CORRA; or
- (2) a public statement or publication of information by the regulatory supervisor for the administrator of CORRA, the Bank of Canada, an insolvency official with jurisdiction over the administrator for CORRA, a resolution authority with jurisdiction over the administrator for CORRA or a court or an entity with similar insolvency or resolution authority over the administrator for CORRA, which states that the administrator of CORRA has ceased or will

Table of Contents

cease to provide CORRA permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide CORRA.

The term “Fallback Index Cessation Effective Date” means, in respect of one or more Fallback Index Cessation Events, the first date on which the Applicable CORRA Fallback Rate is no longer provided. If the Applicable CORRA Fallback Rate ceases to be provided on the same day that it is required to determine the rate for an interest determination date pursuant to the terms of the debt securities but it was provided at the time at which it is to be observed pursuant to the terms of the debt securities (or, if no such time is specified in the terms and provisions of the debt securities, at the time at which it is ordinarily published), then the Fallback Index Cessation Effective Date will be the next day on which the rate would ordinarily have been published.

The term “Fallback Index Cessation Event” means:

- (1) a public statement or publication of information by or on behalf of the administrator or provider of the Applicable CORRA Fallback Rate announcing that it has ceased or will cease to provide the Applicable CORRA Fallback Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator or provider that will continue to provide the Applicable CORRA Fallback Rate; or
- (2) a public statement or publication of information by the regulatory supervisor for the administrator or provider of the Applicable CORRA Fallback Rate, the Bank of Canada, an insolvency official with jurisdiction over the administrator or provider for the Applicable CORRA Fallback Rate, a resolution authority with jurisdiction over the administrator or provider for the Applicable CORRA Fallback Rate or a court or an entity with similar insolvency or resolution authority over the administrator or provider for the Applicable CORRA Fallback Rate, which states that the administrator or provider of the Applicable CORRA Fallback Rate has ceased or will cease to provide the Applicable CORRA Fallback Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator or provider that will continue to provide the Applicable CORRA Fallback Rate.

The term “interest determination date” means the date that is two Bank of Canada business days before each interest payment date (or, in the case of the final interest period of the debt securities, the stated maturity date of the debt securities or, if applicable, the redemption date for such debt securities).

The term “observation period” means, in respect of each interest period, the period from, and including, the date two Bank of Canada business days preceding the first date in such interest period to, but excluding, the date two Bank of Canada business days preceding the interest payment date for such period.

CORRA (Index). For floating rate debt securities for which the base rate is compounded CORRA (Index), compounded CORRA will be determined by the calculation agent using the formula described below, unless otherwise specified in your prospectus supplement.

As used in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — CORRA (Index)”, CORRA means, with respect to any Bank of Canada business day, a reference rate equal to the daily Canadian Overnight Repo Rate Average for that day, as published by the CORRA Reference Rate Administrator on the website of the CORRA Reference Rate Administrator or any successor website on the immediately following Bank of Canada business day.

Table of Contents

Compounded CORRA, for any observation period, is the rate calculated in accordance with the formula below, with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point (0.00000005 being rounded upwards).

$$\text{Compounded CORRA} = \left(\frac{\text{CORRA Compounded Index}_{\text{end}}}{\text{CORRA Compounded Index}_{\text{start}}} - 1 \right) \times \left(\frac{365}{d} \right)$$

Where for purposes of applying the above formula to the terms of the debt securities:

“CORRA Compounded Index_{start}” is equal to CORRA Compounded Index value on the date that is two Bank of Canada business days preceding the first date of the relevant interest period;

“CORRA Compounded Index_{end}” is equal to CORRA Compounded Index value on the date that is two Bank of Canada business days preceding the interest payment date relating to such interest period (or, in the case of the final interest period of the debt securities, the stated maturity date of the debt securities or, if the debt securities are redeemed prior to the stated maturity date, the redemption date for such debt securities); and

“d” is the number of calendar days in the relevant observation period.

Notwithstanding the foregoing, if (1) the CORRA Compounded Index_{start} or the CORRA Compounded Index_{end} is not published or displayed by the CORRA Reference Rate Administrator or an authorized distributor by 11:30 a.m. Toronto time (or an amended publication time, if any, as specified in the CORRA Reference Rate Administrator’s methodology for calculating the CORRA Compounded Index) on the interest determination date for such interest period but a CORRA Compounded Index Cessation Effective Date has not occurred or (2) the calculation agent determines that a CORRA Compounded Index Cessation Event has occurred, the terms and provisions set forth in (i) through (iii) below will apply, in the order set forth below. Notwithstanding (i) through (iii) below, in connection with the implementation of an Applicable CORRA Fallback Rate, the calculation agent may make such changes or adjustments to (1) the Applicable CORRA Fallback Rate or the spread thereon, (2) any interest reset date, interest determination date, interest payment date, other relevant date, business day convention or interest period, (3) the manner, timing and frequency of determining rates and amounts of interest that are payable on the debt securities and the conventions relating to such determination, (4) the timing and frequency of making payments of interest, (5) rounding conventions, (6) tenors, and (7) any other terms or provisions of the debt securities and related definitions, in each case that the calculation agent determines, from time to time, are consistent with accepted market practice or applicable regulatory or legislative action or guidance for the use of such Applicable CORRA Fallback Rate for debt obligations comparable to the debt securities in such circumstances.

(i) No CORRA Compounded Index or CORRA Compounded Index Cessation Effective Date with respect to CORRA Compounded Index. If (1) the CORRA Compounded Index_{start} or the CORRA Compounded Index_{end} is not published or displayed by the CORRA Reference Rate Administrator or an authorized distributor by 11:30 a.m. Toronto time (or an amended publication time, if any, as specified in the CORRA Reference Rate Administrator’s methodology for calculating the CORRA Compounded Index) on the interest determination date for such interest period but a CORRA Compounded Index Cessation Effective Date has not occurred, or (2) the calculation agent determines that a CORRA Compounded Index Cessation Event has occurred, then compounded CORRA for the applicable interest period will be calculated by the calculation agent in accordance with the formula below, with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point (0.00000005 being rounded upwards)

$$\text{Compounded CORRA} = \left(\prod_{i=1}^{d_0} \left(1 + \frac{\text{CORRA}_i \times n_i}{365} \right) - 1 \right) \times \frac{365}{d}$$

Table of Contents

Where for purposes of applying the above formula to the terms of the debt securities:

“CORRA_i”, for any Bank of Canada business day “i” in the relevant observation period, is equal to the daily CORRA rate in respect of that day as published by the CORRA Reference Rate Administrator on the website of the CORRA Reference Rate Administrator or any successor website on the immediately following Bank of Canada business day, which is Bank of Canada business day “i” + 1, provided that if by not later than 11:00 a.m. Toronto Time (or the amended publication deadline for CORRA, if any, specified by the CORRA Reference Rate Administrator) neither the CORRA Reference Rate Administrator nor authorized distributors provide or publish CORRA in respect of that day and a CORRA Cessation Effective Date has not occurred, then, references to CORRA will be deemed to be references to the last provided or published CORRA;

“n_i”, for any Bank of Canada business day “i” in the relevant observation period, is the number of calendar days from, and including such Bank of Canada business day “i” to, but excluding, the following Bank of Canada business day, which is Bank of Canada business day “i” + 1;

“d” is the number of calendar days in the relevant observation period;

“d₀” for any observation period, is the number of Bank of Canada business days in the relevant observation period; and

“i” is a series of whole numbers from one to d₀, each representing the relevant Bank of Canada business day in chronological order from, and including, the first Bank of Canada business day in the relevant observation period.

(ii) **CORRA Index Cessation Effective Date.** If the calculation agent determines that a CORRA Cessation Event has occurred, then the rate for an interest determination date which occurs on or after the CORRA Cessation Effective Date with respect to compounded CORRA will be the CAD Recommended Rate, to which the calculation agent shall apply the most recently published spread, as at the CORRA Cessation Effective Date with respect to compounded CORRA after making such adjustments to the CAD Recommended Rate as the calculation agent determines to be necessary to account for any difference in term, structure or tenor of the CAD Recommended Rate by comparison to compounded CORRA. If there is a CAD Recommended Rate before the end of the first Bank of Canada business day following the CORRA Cessation Effective Date with respect to compounded CORRA but neither the administrator nor authorized distributors provide or publish the CAD Recommended Rate and a Fallback Index Cessation Effective Date with respect to it has not occurred, then, in respect of any day for which the CAD Recommended Rate is required, references to the CAD Recommended Rate will be deemed to be references to the last provided or published CAD Recommended Rate.

(iii) **No CAD Recommended Rate or Fallback Index Cessation Effective Date with respect to CAD Recommended Rate.** If there is no CAD Recommended Rate before the end of the first Bank of Canada business day following a CORRA Cessation Effective Date with respect to compounded CORRA; or there is a CAD Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, then the rate for an interest determination date which occurs on or after the CORRA Cessation Effective Date with respect to compounded CORRA or the Fallback Index Cessation Effective Date with respect to the CAD Recommended Rate (as applicable) will be the BOC Target Rate, to which the calculation agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to compounded CORRA, after making such adjustments to the BOC Target Rate as the calculation agent determined to be necessary to account for any difference in term, structure or tenor of the BOC Target Rate by comparison to compounded CORRA. If neither the administrator nor authorized distributors provide or publish the BOC Target Rate and a Fallback Index Cessation Effective Date with respect to the BOC Target Rate has not occurred, then, in respect of any day for which the BOC Target Rate is required, references to the BOC Target Rate will be deemed to be references to the last provided or published BOC Target Rate.

Table of Contents

Any determination, decision or election that may be made by the calculation agent pursuant to the provisions described in this “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — CORRA (Index)”, including any determination with respect to a rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error, may be made in the calculation agent’s sole discretion, and, notwithstanding anything to the contrary in the documentation relating to the debt securities, shall become effective without consent from any other party. The calculation agent’s determination of any interest rate, and its calculation of the amount of interest for any observation period or interest period, will be on file at our principal offices and will be made available to any holder of debt securities upon request.

All Canadian dollar amounts resulting from the calculation of interest, as described above during the relevant periods, will be rounded to the nearest cent.

As used in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — CORRA (Index)”:

The term “Applicable CORRA Fallback Rate” means one of the CAD Recommended Rate or the BOC Target Rate, as applicable.

The term “BOC Target Rate” means the Bank of Canada’s Target for the Overnight Rate as set by the Bank of Canada and published on the Bank of Canada’s website.

The term “CAD Recommended Rate” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for CORRA by a committee officially endorsed or convened by the Bank of Canada for the purpose of recommending a replacement for CORRA (which rate may be produced by the Bank of Canada or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

The term “CORRA Cessation Effective Date” means, in respect of one or more CORRA Cessation Events, the first date on which CORRA is no longer provided. If CORRA ceases to be provided on the same day that it is required to determine the rate for an interest period but it was provided on the interest determination date for such interest period, then the CORRA Cessation Effective Date will be the next day on which the rate would ordinarily have been published.

The term “CORRA Cessation Event” means:

- (1) a public statement or publication of information by or on behalf of the administrator of CORRA announcing that it has ceased or will cease to provide CORRA permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide CORRA; or
- (2) a public statement or publication of information by the regulatory supervisor for the administrator of CORRA, the Bank of Canada, an insolvency official with jurisdiction over the administrator for CORRA, a resolution authority with jurisdiction over the administrator for CORRA or a court or an entity with similar insolvency or resolution authority over the administrator for CORRA, which states that the administrator of CORRA has ceased or will cease to provide CORRA permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide CORRA.

The term “CORRA Compounded Index Cessation Effective Date” means, in respect of one or more CORRA Compounded Index Cessation Events, the first date on which CORRA Compounded

Table of Contents

Index is no longer provided. If CORRA Compounded Index ceases to be provided on the same day that it is required to determine the rate for an interest period but it was provided on the interest determination date for such interest period, then the CORRA Compounded Index Cessation Effective Date will be the next day on which the rate would ordinarily have been published.

The term “CORRA Compounded Index Cessation Event” means:

- (1) a public statement or publication of information by or on behalf of the administrator of CORRA Compounded Index announcing that it has ceased or will cease to provide CORRA Compounded Index permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide CORRA Compounded Index; or
- (2) a public statement or publication of information by the regulatory supervisor for the administrator of CORRA Compounded Index, the Bank of Canada, an insolvency official with jurisdiction over the administrator for CORRA Compounded Index, a resolution authority with jurisdiction over the administrator for CORRA Compounded Index or a court or an entity with similar insolvency or resolution authority over the administrator for CORRA Compounded Index, which states that the administrator of CORRA Compounded Index has ceased or will cease to provide CORRA Compounded Index permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide CORRA Compounded Index.

The term “Fallback Index Cessation Effective Date” means, in respect of one or more Fallback Index Cessation Events, the first date on which the Applicable CORRA Fallback Rate is no longer provided. If the Applicable CORRA Fallback Rate ceases to be provided on the same day that it is required to determine the rate for an interest determination date pursuant to the terms of the debt securities but it was provided at the time at which it is to be observed pursuant to the terms of the debt securities (or, if no such time is specified in the terms and provisions of the debt securities, at the time at which it is ordinarily published), then the Fallback Index Cessation Effective Date will be the next day on which the rate would ordinarily have been published.

The term “Fallback Index Cessation Event” means:

- (1) a public statement or publication of information by or on behalf of the administrator or provider of the Applicable CORRA Fallback Rate announcing that it has ceased or will cease to provide the Applicable CORRA Fallback Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator or provider that will continue to provide the Applicable CORRA Fallback Rate; or
- (2) a public statement or publication of information by the regulatory supervisor for the administrator or provider of the Applicable CORRA Fallback Rate, the Bank of Canada, an insolvency official with jurisdiction over the administrator or provider for the Applicable CORRA Fallback Rate, a resolution authority with jurisdiction over the administrator or provider for the Applicable CORRA Fallback Rate or a court or an entity with similar insolvency or resolution authority over the administrator or provider for the Applicable CORRA Fallback Rate, which states that the administrator or provider of the Applicable CORRA Fallback Rate has ceased or will cease to provide the Applicable CORRA Fallback Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator or provider that will continue to provide the Applicable CORRA Fallback Rate.

The term “interest determination date” means the date that is two Bank of Canada business days before each interest payment date (or, in the case of the final interest period of the debt securities, the

[Table of Contents](#)

stated maturity date of the debt securities or, if applicable, the redemption date for such debt securities).

The term “observation period” means, in respect of each interest period, the period from, and including, the date two Bank of Canada business days preceding the first date in such interest period to, but excluding, the date two Bank of Canada business days preceding the interest payment date for such period.

EURIBOR. For floating rate debt securities issued prior to July 1, 2020 for which the base rate is EURIBOR, EURIBOR will be the offered rate for deposits in euros having the index maturity specified in the applicable prospectus supplement, as that rate appears on the Refinitiv page EURIBOR01 as of approximately 11:00 A.M., Brussels time, on the relevant interest determination date.

If the rate described above does not so appear on the Refinitiv page EURIBOR01, EURIBOR will be determined on the basis of the rates at which deposits in euros are offered by four major banks in the **euro-zone** interbank market, at approximately 11:00 A.M., Brussels time, on the relevant EURIBOR interest determination date, to prime banks in the euro-zone interbank market for a period of the specified index maturity commencing on the relevant interest reset date and in a representative amount, assuming an Actual/360 (ISDA) day count basis. The calculation agent will request the principal euro-zone office of each of these four banks to provide a quotation of its rate. If at least two quotations are provided, EURIBOR for the relevant interest reset date will be the arithmetic mean of the quotations.

If fewer than two quotations are provided as described in the preceding paragraph, EURIBOR for the relevant interest reset date will be the arithmetic mean of the rates quoted by major banks in the euro-zone, selected by the calculation agent at approximately 11:00 A.M., Brussels time, on that interest reset date, for loans of euros to leading European banks for the specified index maturity, beginning on the relevant interest reset date, and in a representative amount.

If no quotation is provided as described in the preceding paragraph, then the calculation agent, after consulting such sources as it deems comparable to any of the foregoing quotations or display page, or any such source as it deems reasonable from which to estimate EURIBOR or any of the foregoing lending rates, shall determine EURIBOR for that interest reset date in its sole discretion.

Federal Funds Rate. For floating rate debt securities issued prior to July 1, 2020 for which the base rate is federal funds rate, the applicable prospectus supplement describes how federal funds rate is determined.

In respect of future floating rate debt securities issued on or after July 1, 2020 for which the base rate is federal funds rate, federal funds rate will be will be the rate for U.S. dollar federal funds on the relevant interest reset date, as set forth in **H.15 Daily Update** opposite the heading “Federal funds (effective)”, as that rate is displayed on the Refinitiv page FEDFUNDS1 for that day.

If, by approximately 5:00 P.M., New York City time, on the day that is one New York City banking day following the relevant interest reset date, the federal funds (effective) rate for the relevant interest reset date does not appears on Refinitiv page FEDFUNDS1, then the federal funds (effective) rate, for that interest reset date, will be the rate published in H.15 Daily Update, or another recognized electronic source used for displaying that rate, under the heading “Federal funds (effective)”.

If the rate cannot be determined as described in the preceding paragraph, then the federal funds (effective) rate for the relevant interest reset date will be the rate for the first day preceding the relevant

[Table of Contents](#)

interest reset date for which such rate is set forth in H.15 Daily Update opposite the heading “Federal funds (effective)”, as such rate is displayed on the Refinitiv page FEDFUNDS1.

LIBOR. For floating rate debt securities issued prior to July 1, 2020 for which the base rate is LIBOR, the applicable prospectus supplement describes how LIBOR is determined.

In respect of future floating rate debt securities issued on or after July 1, 2020 for which the base rate is LIBOR, after the initial interest period, LIBOR will be the offered rate appearing on the **Refinitiv page LIBOR01** as of approximately 11:00 A.M., London time, on the relevant interest determination date, for deposits in U.S. Dollars or other index currency having the relevant index maturity (e.g., three months) beginning on the relevant interest reset date.

If the rate described above does not so appear on the Refinitiv page LIBOR01, then LIBOR for that interest reset date will be equal to such rate on the interest determination date when LIBOR for the relevant index maturity was last available on the Refinitiv page LIBOR01, as determined by the calculation agent.

Notwithstanding the foregoing, with respect to floating rate securities issued on or after July 1, 2020 for which the base rate is LIBOR, if the calculation agent determines that a benchmark transition event and its related benchmark replacement date have occurred prior to the reference time in respect of any determination of the benchmark on any date, the benchmark replacement will replace the then-current benchmark for all purposes relating to the floating rate debt securities in respect of such determination on such date and all determinations on all subsequent dates.

In connection with the implementation of a benchmark replacement, the calculation agent will have the right to make benchmark replacement conforming changes from time to time.

Any determination, decision or election that may be made by the calculation agent pursuant to the provisions set forth in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — LIBOR” (the “Benchmark Transition Provisions”), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection:

- will be conclusive and binding absent manifest error;
- may be made in the calculation agent’s sole discretion; and
- notwithstanding anything to the contrary in the documentation relating to the debt securities, shall become effective without consent from the holders of the debt securities or any other party.

The calculation agent’s determination of any interest rate, and its calculation of the amount of interest for any relevant interest period, will be on file at our principal offices, will be made available to any holder of the debt securities upon request.

As used in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — LIBOR”:

The term “benchmark” means, initially, LIBOR for the relevant index maturity; provided that if a benchmark transition event and its related benchmark replacement date have occurred with respect to LIBOR for the relevant index maturity or the then-current benchmark, then “benchmark” means the applicable benchmark replacement.

Table of Contents

The term “benchmark replacement” means the interpolated benchmark; provided that if the calculation agent cannot determine the interpolated benchmark as of the benchmark replacement date, then “benchmark replacement” means the first alternative set forth in the order below that can be determined by the calculation agent as of the benchmark replacement date:

- (1) the sum of: (a) term SOFR and (b) the benchmark replacement adjustment;
- (2) the sum of: (a) compounded SOFR and (b) the benchmark replacement adjustment;
- (3) the sum of: (a) the alternate rate of interest that has been selected or recommended by the relevant governmental body as the replacement for the then-current benchmark for the applicable corresponding tenor and (b) the benchmark replacement adjustment;
- (4) the sum of: (a) the ISDA fallback rate and (b) the benchmark replacement adjustment;
- (5) provided that if (i) the benchmark replacement cannot be determined in accordance with clause (3) or (4) above as of the benchmark replacement date or (ii) the calculation agent shall have determined that the ISDA fallback rate determined in accordance with clause (4) above is not an industry-accepted rate of interest as a replacement for the then-current benchmark for U.S. dollar denominated floating rate debt securities at such time, then the benchmark replacement shall be the sum of: (a) the alternate rate of interest that has been selected by the calculation agent as the replacement for the then current benchmark for the applicable corresponding tenor giving due consideration to any industry accepted rate of interest as a replacement for the then-current benchmark for U.S. dollar denominated floating rate fixed income instruments at such time and (b) the benchmark replacement adjustment.

The term “benchmark replacement adjustment” means the first alternative set forth in the order below that can be determined by the calculation agent as of the benchmark replacement date:

- (1) the spread adjustment (which may be a positive or negative value or zero), or method for calculating or determining such spread adjustment, that has been selected or recommended by the relevant governmental body for the applicable unadjusted benchmark replacement;
- (2) if the applicable unadjusted benchmark replacement is equivalent to the ISDA fallback rate, then the ISDA fallback adjustment;
- (3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the calculation agent giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current benchmark with the applicable unadjusted benchmark replacement for U.S. dollar-denominated floating rate fixed income instruments at such time.

The term “benchmark replacement conforming changes” means, with respect to any benchmark replacement, any technical, administrative or operational changes (including changes to the definitions of “business day” and “interest period”, timing and frequency of determining rates, and making payments of interest, rounding of amounts or tenors and other administrative matters) that the calculation agent decides may be appropriate to reflect the adoption of such benchmark replacement in a manner substantially consistent with market practice (or, if the calculation agent decides that adoption of any portion of such market practice is not administratively feasible or if the calculation agent determines that no market practice for use of the benchmark replacement exists, in such other manner as the calculation agent determines is reasonably necessary).

The term “benchmark replacement date” means the earliest to occur of the following events with respect to the then-current benchmark:

- (1) in the case of clause (1) or (2) of the definition of “benchmark transition event,” the later of (a) the date of the public statement or publication of information referenced therein and (b) the

Table of Contents

date on which the administrator of the benchmark permanently or indefinitely ceases to provide the benchmark; or

- (2) in the case of clause (3) of the definition of “benchmark transition event,” the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the benchmark replacement date occurs on the same day as, but earlier than, the reference time in respect of any determination, the benchmark replacement date will be deemed to have occurred prior to the reference time for such determination.

For the avoidance of doubt, for purposes of the definitions of benchmark replacement date and benchmark transition event, references to “benchmark” also include any reference rate underlying such benchmark (for example, if the benchmark becomes the sum of (a) compounded SOFR and (b) the benchmark replacement adjustment in accordance with clause (2) of the definition of “benchmark replacement”, references to benchmark would include SOFR).

The term “benchmark transition event” means the occurrence of one or more of the following events with respect to the then-current benchmark:

- (1) a public statement or publication of information by or on behalf of the administrator of the benchmark announcing that such administrator has ceased or will cease to provide the benchmark, permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the benchmark;
- (2) a public statement or publication of information by the regulatory supervisor for the administrator of the benchmark, the central bank for the currency of the benchmark, an insolvency official with jurisdiction over the administrator for the benchmark, a resolution authority with jurisdiction over the administrator for the benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the benchmark, which states that the administrator of the benchmark has ceased or will cease to provide the benchmark permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the benchmark; or
- (3) a public statement or publication of information by the regulatory supervisor for the administrator of the benchmark announcing that the benchmark is no longer representative.

The term “compounded SOFR” means the compounded average of SOFRs for the applicable corresponding tenor, with the rate, or methodology for this rate, and conventions for this rate (which will be compounded in arrears with an observation, lookback and/or suspension period as a mechanism to determine the interest payable prior to the end of each interest period) being established by the calculation agent in accordance with:

- (1) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the relevant governmental body for determining compounded SOFR; provided that:
- (2) if, and to the extent that, the calculation agent determines that compounded SOFR cannot be determined in accordance with clause (1) above, then the rate, or methodology for this rate, and conventions for this rate that have been selected by the calculation agent giving due consideration to any industry-accepted market practice for U.S. dollar denominated floating rate fixed income instruments at such time.

For the avoidance of doubt, the calculation of compounded SOFR shall exclude the benchmark replacement adjustment and the applicable margin or spread.

The term “corresponding tenor” with respect to a benchmark replacement means a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the then-current benchmark.

Table of Contents

The term “Federal Reserve Bank of New York’s Website” means the website of the Federal Reserve Bank of New York at <http://www.newyorkfed.org>, or any successor source. We are not incorporating by reference the website or any material it includes in this prospectus.

The term “interpolated benchmark” with respect to the benchmark means the rate determined for the corresponding tenor by interpolating on a linear basis between: (1) the benchmark for the longest period (for which the benchmark is available) that is shorter than the corresponding tenor and (2) the benchmark for the shortest period (for which the benchmark is available) that is longer than the corresponding tenor.

The term “ISDA definitions” means the 2006 ISDA definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time.

The term “ISDA fallback adjustment” means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA definitions to be determined upon the occurrence of an index cessation event with respect to the benchmark for the applicable tenor.

The term “ISDA fallback rate” means the rate that would apply for derivatives transactions referencing the ISDA definitions to be effective upon the occurrence of an index cessation date with respect to the benchmark for the applicable tenor excluding the applicable ISDA fallback adjustment.

The term “reference time” with respect to any determination of the benchmark means (1) if the benchmark is LIBOR, 11:00 a.m. (London time) on the day that is two London business days preceding the date of such determination, and (2) if the benchmark is not LIBOR, the time determined by the calculation agent in accordance with the benchmark replacement conforming changes.

The term “relevant governmental body” means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

The term “SOFR” with respect to any day means the secured overnight financing rate published for such day by the Federal Reserve Bank of New York, as the administrator of the benchmark (or a successor administrator) on the Federal Reserve Bank of New York’s Website.

The term “term SOFR” means the forward-looking term rate for the applicable corresponding tenor based on SOFR that has been selected or recommended by the relevant governmental body.

The term “unadjusted benchmark replacement” means the benchmark replacement excluding the benchmark replacement adjustment.

SOFR. For floating rate debt securities issued prior to July 1, 2020 for which the base rate is compounded SOFR, the applicable prospectus supplement describes how compounded SOFR is determined.

In respect of future floating rate debt securities issued on or after July 1, 2020 for which the base rate is compounded SOFR, compounded SOFR will be determined by the calculation agent using the formula described below, unless otherwise specified in your prospectus supplement.

[Table of Contents](#)

As used in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — SOFR”, SOFR means, with respect to any date:

- (1) the Secured Overnight Financing Rate published for such date as such rate appears on the Federal Reserve Bank of New York’s Website at 3:00 p.m. (New York time) on the immediately following U.S. Government Securities Business Day.
- (2) if the rate specified in (1) above does not so appear, the Secured Overnight Financing Rate as published in respect of the first preceding U.S. Government Securities Business Day for which the Secured Overnight Financing Rate was published on the Federal Reserve Bank of New York’s Website.

Compounded SOFR is a rate of return of a daily compounded interest investment calculated in accordance with the formula set forth below, with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point (0.00000005 being rounded upwards):

$$\left[\prod_{i=1}^{d_0} \left(1 + \frac{SOFR_i \times n_i}{360} \right) - 1 \right] \times \frac{360}{d}$$

where for purposes of applying the above formula to the terms of the applicable floating rate debt security: “d₀”, for any observation period, is the number of U.S. government securities business days in the relevant observation period;

“i” is a series of whole numbers from one to d₀, each representing the relevant U.S. government securities business day in chronological order from, and including, the first U.S. government securities business day in the relevant observation period;

“SOFR_i”, for any day “i” in the relevant observation period, is equal to the SOFR in respect of that day;

“n_i”, for day “i” in the relevant observation period, is the number of calendar days from, and including, such U.S. government securities business day “i” up to, but excluding, the following U.S. government securities business day; and

“d” is the number of calendar days in the relevant observation period.

Notwithstanding the foregoing, if the calculation agent determines that a benchmark transition event and its related benchmark replacement date have occurred prior to the interest determination date in respect of any interest payment date, the benchmark replacement will replace the then-current benchmark for all purposes relating to the debt securities in respect of such determination on such date and all determinations on all subsequent dates.

In connection with the implementation of a benchmark replacement, the calculation agent will have the right to make benchmark replacement conforming changes from time to time.

Any determination, decision or election that may be made by the calculation agent pursuant to the provisions described in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — SOFR”, including any determination with respect to a rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error, may be made in the calculation agent’s sole discretion, and, notwithstanding anything to the contrary in the documentation relating to the debt securities, shall become effective without consent from any other party.

Table of Contents

The calculation agent’s determination of any interest rate, and its calculation of the amount of interest for any observation period or interest period, will be on file at our principal offices and will be made available to any security holder upon request.

As used in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — SOFR”:

The term “benchmark” means, initially, compounded SOFR, as defined above; provided that if a benchmark transition event and its related benchmark replacement date have occurred with respect to compounded SOFR or the then-current benchmark, then “benchmark” means the applicable benchmark replacement.

The term “benchmark replacement” means the first alternative set forth in the order below that can be determined by the calculation agent as of the benchmark replacement date:

- (1) the sum of: (a) the alternate rate of interest that has been selected or recommended by the relevant governmental body as the replacement for the then-current benchmark and (b) the benchmark replacement adjustment;
- (2) the sum of: (a) the ISDA fallback rate and (b) the benchmark replacement adjustment;
- (3) provided that if (i) the benchmark replacement cannot be determined in accordance with clause (1) or (2) above as of the benchmark replacement date or (ii) the calculation agent shall have determined that the ISDA fallback rate determined in accordance with clause (2) above is not an industry-accepted rate of interest as a replacement for the then-current benchmark for U.S. dollar-denominated floating rate debt securities at such time, then the benchmark replacement shall be the sum of: (a) the alternate rate of interest that has been selected by the calculation agent as the replacement for the then-current benchmark giving due consideration to any industry-accepted rate of interest as a replacement for the then-current benchmark for U.S. dollar-denominated floating rate debt securities at such time and (b) the benchmark replacement adjustment.

The term “benchmark replacement adjustment” means the first alternative set forth in the order below that can be determined by the calculation agent as of the benchmark replacement date:

- (1) the spread adjustment (which may be a positive or negative value or zero), or method for calculating or determining such spread adjustment, that has been selected or recommended by the relevant governmental body for the applicable unadjusted benchmark replacement;
- (2) if the applicable unadjusted benchmark replacement is equivalent to the ISDA fallback rate, then the ISDA fallback adjustment;
- (3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the calculation agent giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current benchmark with the applicable unadjusted benchmark replacement for U.S. dollar-denominated floating rate debt securities at such time.

The term “benchmark replacement conforming changes” means, with respect to any benchmark replacement, any technical, administrative or operational changes (including changes to the definitions of “interest period”, “interest determination date” and “observation period”, timing and frequency of determining rates and making payments of interest, and other administrative matters) that the calculation agent decides may be appropriate to reflect the adoption of such benchmark replacement in a manner substantially consistent with market practice (or, if the calculation agent decides that adoption of any portion of such market practice is not administratively feasible or if the calculation

Table of Contents

agent determines that no market practice for use of the benchmark replacement exists, in such other manner as the calculation agent determines is reasonably necessary).

The term “benchmark replacement date” means the earliest to occur of the following events with respect to the then-current benchmark:

- (1) in the case of clause (1) or (2) of the definition of “benchmark transition event,” the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of the benchmark permanently or indefinitely ceases to provide the benchmark; or
- (2) in the case of clause (3) of the definition of “benchmark transition event,” the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the benchmark replacement date occurs on the same day as the interest determination date, but earlier than the reference time on that date, the benchmark replacement date will be deemed to have occurred prior to the reference time for such determination.

For the avoidance of doubt, for purposes of the definitions of benchmark replacement date and benchmark transition event in this section entitled “— Calculations of Interest on Debt Securities — Floating Rate Debt Securities — SOFR”, references to benchmark also include any reference rate underlying such benchmark.

The term “benchmark transition event” means the occurrence of one or more of the following events with respect to the then-current benchmark:

- (1) a public statement or publication of information by or on behalf of the administrator of the benchmark announcing that such administrator has ceased or will cease to provide the benchmark, permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the benchmark;
- (2) a public statement or publication of information by the regulatory supervisor for the administrator of the benchmark, the central bank for the currency of the benchmark, an insolvency official with jurisdiction over the administrator for the benchmark, a resolution authority with jurisdiction over the administrator for the benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the benchmark, which states that the administrator of the benchmark has ceased or will cease to provide the benchmark permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the benchmark; or
- (3) a public statement or publication of information by the regulatory supervisor for the administrator of the benchmark announcing that the benchmark is no longer representative.

The term “Federal Reserve Bank of New York’s Website” means the website of the Federal Reserve Bank of New York at <http://www.newyorkfed.org>, or any successor source.

The term “interest determination date” means the date two U.S. government securities business days before each interest payment date.

The term “ISDA definitions” means the 2006 ISDA definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time.

Table of Contents

The term “ISDA fallback adjustment” means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA definitions to be determined upon the occurrence of an index cessation event with respect to the benchmark for the applicable tenor.

The term “ISDA fallback rate” means the rate that would apply for derivatives transactions referencing the ISDA definitions to be effective upon the occurrence of an index cessation date with respect to the benchmark for the applicable tenor excluding the applicable ISDA fallback adjustment.

The term “observation period” means, in respect of each interest period, the period from, and including, the date two U.S. government securities business days preceding the first date in such interest period to, but excluding, the date two U.S. government securities business days preceding the interest payment date for such interest period.

The term “reference time” with respect to any determination of the benchmark means (1) if the benchmark is compounded SOFR, 3:00 p.m. (New York time) on the date of such determination, and (2) if the benchmark is not compounded SOFR, the time determined by the calculation agent in accordance with the benchmark replacement conforming changes.

The term “relevant governmental body” means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

The term “unadjusted benchmark replacement” means the benchmark replacement excluding the benchmark replacement adjustment.

Prime Rate. For floating rate debt securities issued prior to July 1, 2020 for which the base rate is prime rate, the prime rate will be the rate, for the relevant interest reset date, published in H.15 Daily Update opposite the heading “Bank prime loan” (or in another recognized electronic source determined by the calculation agent in its sole discretion).

If the rate described above does not appear in H.15 Daily Update or another recognized electronic source by approximately 5:00 P.M., New York City time, on the day that is one New York City banking day following the relevant interest reset date, then the prime rate for the relevant interest reset date will be the rate for the day first preceding the relevant interest reset date for which such rate is set forth in H.15 Daily Update opposite the heading “Bank prime loan” (or in another recognized electronic source determined by the calculation agent in its sole discretion).

Treasury Rate.

Floating Rate Debt Securities Issued on or after July 1, 2020

For floating rate debt securities issued on or after July 1, 2020 for which the base rate is treasury rate, the treasury rate for the relevant interest reset date will be the rate for U.S. government treasury bills, as that rate appears on the Refinitiv page USAUCTION10 or USAUCTION11 on the relevant interest determination date, opposite the relevant index maturity specified in the applicable prospectus supplement under the heading “INVEST RATE”.

If the rate described above does not appear on either page on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from one of those sources at that time, but U.S. government treasury bills having the specified index maturity have been auctioned during the relevant interest period, then the treasury rate will be the **bond equivalent yield** of the rate,

Table of Contents

for the relevant interest reset date, as published in H.15 Daily Update, or another recognized electronic source used for displaying that rate, for that day and for the specified index maturity, under a heading indicating that such rate is the “auction high” rate for United States treasury bills.

If the rate cannot be determined as described in the preceding paragraph, then the treasury rate will be the bond equivalent yield of the auction rate for treasury bills with a remaining maturity equal to the specified index maturity as announced by the United States Treasury.

If no such auction is held for the relevant week, the treasury rate will be the rate, for the relevant interest reset date and for treasury bills having the specified index maturity, as published in H.15 Daily Update, or another recognized electronic source used for displaying that rate, under the heading “U.S. government securities/Treasury bills (secondary market)”.

If the rate described in the prior paragraph does not appear in H.15 Daily Update or another recognized electronic source on the relevant interest calculation date (unless the calculation is made earlier and the rate is available from that source at that time), then the calculation agent, after consulting such sources as it deems comparable to any display page or other U.S. government publication or source, or any other source as it deems reasonable from which to estimate the treasury bills auction rate, shall determine the treasury rate in its sole discretion, provided that if the calculation agent determines there is an industry-accepted successor treasury rate, then the calculation agent shall use such successor rate. If the calculation agent has determined a substitute or successor rate in accordance with the foregoing, the calculation agent in its sole discretion may determine the business day convention, the definition of business day and the interest reset date to be used and any other relevant methodology for calculating such substitute or successor rate, including any adjustment factor needed to make such substitute or successor rate comparable to the treasury rate, in a manner that is consistent with any industry-accepted practices for such substitute or successor rate.

Floating Rate Debt Securities Issued Prior to July 1, 2020

For floating rate debt securities issued prior to July 1, 2020 for which the base rate is treasury rate, the treasury rate for the relevant interest reset date will be the rate for U.S. government treasury bills, as that rate appears on the Refinitiv page USAUCTION10 or USAUCTION11 on the relevant interest determination date, opposite the relevant index maturity specified in the applicable prospectus supplement under the heading “INVEST RATE”.

If the rate described above does not appear on either page on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from one of those sources at that time, but U.S. government treasury bills having the specified index maturity have been auctioned during the relevant interest period, then the treasury rate will be the bond equivalent yield of the rate, for the relevant interest reset date, as published in H.15 Daily Update, or another recognized electronic source used for displaying that rate, for that day and for the specified index maturity, under a heading indicating that such rate is the “auction high” rate for United States treasury bills.

If the rate cannot be determined as described in the preceding paragraph, then the treasury rate will be the bond equivalent yield of the auction rate for treasury bills with a remaining maturity equal to the specified index maturity as announced by the United States Treasury.

If no such auction is held for the relevant week, the treasury rate will be the rate, for the relevant interest reset date and for treasury bills having the specified index maturity, as published in H.15 Daily Update, or another recognized electronic source used for displaying that rate, under the heading “U.S. government securities/Treasury bills (secondary market)”.

[Table of Contents](#)

If the rate described in the prior paragraph does not appear in H.15 Daily Update or another recognized electronic source on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from that source at that time, the treasury rate will be the bond equivalent yield of the arithmetic mean of the following secondary market bid rates for the issue of treasury bills with a remaining maturity closest to the specified index maturity: the rates bid as of approximately 3:30 P.M., New York City time, on the relevant interest reset date, by primary U.S. government securities dealers in New York City selected by the calculation agent.

If no quotation is provided as described in the preceding paragraph, then the calculation agent, after consulting such sources as it deems comparable to any of the foregoing secondary market bids or any display page or other U.S. government publication or source, or any other source as it deems reasonable from which to estimate the treasury bills auction rate or any of the foregoing secondary market bid rates, shall determine the treasury rate for that interest reset date in its sole discretion.

Special Rate Calculation Terms. In this section entitled “— Floating Rate Debt Securities”, we use several terms that have special meanings relevant to calculating floating interest rates. We define these terms as follows:

The term “**bond equivalent yield**” means a yield expressed as a percentage and calculated in accordance with the following formula:

Bond Equivalent Yield =
$$\frac{D \times N}{360 - (D \times M)} \times 100$$

where:

- “D” means the annual rate for treasury bills quoted on a bank discount basis and expressed as a decimal;
- “N” means 365 or 366, as the case may be; and
- “M” means the actual number of days in the applicable interest reset period.

The term “**CORRA Compounded Index**” means the measure of the cumulative impact of CORRA compounding over time administered and published by the Bank of Canada (or any successor CORRA Reference Rate Administrator).

The term “**CORRA Reference Rate Administrator**” means The Bank of Canada or any successor administrator for CORRA and/or the CORRA Compounded Index or the administrator (or its successor) of an Applicable CORRA Fallback Rate, as applicable.

The term “**designated CMT index maturity**” means the index maturity for CMT rate debt securities and will be the original period to maturity of a U.S. Treasury security — either 1, 2, 3, 5, 7, 10, 20 or 30 years — specified in the applicable prospectus supplement. If no such original maturity period is so specified, the designated CMT index maturity will be 2 years.

The term “**designated CMT Refinitiv page**” means the Refinitiv page specified in your prospectus supplement that displays Treasury constant maturities as published by the Federal Reserve System Board of Governors, or its successor, on its website. If no Refinitiv page is so specified, then the applicable page will be the Refinitiv page FRBCMT.

The term “**euro-zone**” means, at any time, the region comprised of the member states of the European Economic and Monetary Union, or any successor union, that, as of that time, have adopted a single currency in accordance with the Treaty on European Union of February 1992, or any successor treaty.

Table of Contents

The term “**H.15 Daily Update**” means the daily statistical release designated as such published by the Federal Reserve System Board of Governors, or its successor, available through the website of the Board of Governors of the Federal Reserve System at <https://www.federalreserve.gov/releases/h15/>, or any successor site or publication.

The term “**index currency**” means the currency specified as such in the applicable prospectus supplement. The index currency may be U.S. dollars or any other currency, and will be U.S. dollars unless another currency is specified in the applicable prospectus supplement.

The term “**index maturity**” means, with respect to floating rate debt securities, the period to maturity of the instrument or obligation on which the interest rate formula is based, as specified in the applicable prospectus supplement.

The term “**representative amount**” means an amount that, in the calculation agent’s judgment, is representative of a single transaction in the relevant market at the relevant time.

The term “**Refinitiv page**” means the display on the Refinitiv Eikon service, or any successor or replacement service, on the page or pages specified in this prospectus, the applicable prospectus supplement, or any successor or replacement page or pages on that service.

The term “**Refinitiv page LIBOR01**” means, unless otherwise specified in your prospectus supplement, the LIBOR01 page on the Refinitiv Eikon service (or any successor service) (or any replacement page or pages on the Refinitiv Eikon service or any successor service on which London interbank rates of major banks for U.S. Dollars are displayed).

Calculation Agent. Calculations relating to interest on floating rate debt securities will be made by the calculation agent, an institution that we appoint as our agent for this purpose. That institution may include any affiliate of ours, such as GS&Co. The prospectus supplement for a particular floating rate debt security or series of debt securities will name the institution that we have appointed to act as the calculation agent for that debt security as of its original issue date. Unless otherwise specified in the applicable prospectus supplement, we have initially appointed GS&Co. as calculation agent for all the floating rate debt securities that we may issue hereunder. We may appoint a different institution to serve as calculation agent from time to time after the original issue date of the debt security without your consent and without notifying you of the change. Absent manifest error, all determinations of the calculation agent will be final and binding on you and us, without any liability on the part of the calculation agent.

Redemption and Repayment

Unless otherwise indicated in your prospectus supplement, your debt security will not be entitled to the benefit of any sinking fund — that is, we will not deposit money on a regular basis into any separate custodial account to repay your debt securities. In addition, we will not be entitled to redeem your debt security before its stated maturity unless your prospectus supplement specifies a redemption commencement date. You will not be entitled to require us to buy your debt security from you, before its stated maturity, unless your prospectus supplement specifies one or more repayment dates.

If your prospectus supplement specifies a redemption commencement date or a repayment date, it may also specify one or more redemption prices or repayment prices, which may be expressed as a percentage of the principal amount of your debt security. It may also specify one or more redemption periods during which the redemption prices relating to a redemption of debt securities during those periods will apply.

Table of Contents

If your prospectus supplement specifies a repayment date, your debt security will be repayable at the holder's option on the specified repayment date at the specified repayment price, together with interest accrued to but excluding the repayment date.

If a debt security represented by a global debt security is subject to repayment at the holder's option, the depositary or its nominee, as the holder, will be the only person that can exercise the right to repayment. Any indirect owners who own beneficial interests in the global debt security and wish to exercise a repayment right must give proper and timely instructions to their banks or brokers through which they hold their interests, requesting that they notify the depositary to exercise the repayment right on their behalf. Different firms have different deadlines for accepting instructions from their customers, and you should take care to act promptly enough to ensure that your request is given effect by the depositary before the applicable deadline for exercise.

Tax redemption. If your prospectus supplement specifies that we will pay additional amounts with respect to your debt securities, as described below under “— Payment of Additional Amounts”, we will be entitled, at our option, to redeem the outstanding debt securities in whole and not in part if at any time we become obligated to pay additional amounts on your debt securities on the next date on which payments are made, but only if our obligation results from a change in the laws or regulations of any U.S. taxing authority (as defined below in “— Payment of Additional Amounts”), or from a change in any official interpretation or application of those laws or regulations, that becomes effective or is announced on or after the date of your prospectus supplement, unless another date is specified.

If we redeem your debt securities because we have become obligated to pay additional amounts, we will do so at a redemption price equal to 100% of the principal amount of the debt securities redeemed *plus* accrued interest to the redemption date.

If we become entitled to redeem your debt securities because we have become obligated to pay additional amounts, we may do so at any time on a redemption date of our choice. However, we must give the holders of the debt securities being redeemed notice of the redemption not less than 30 days or more than 60 days before the redemption date and not more than 90 days before the next date on which we would be obligated to pay additional amounts. In addition, our obligation to pay additional amounts must remain in effect when we give the notice of redemption. We will give the notice in the manner described below under “ — Notices”.

Optional redemption. If your prospectus supplement specifies that redemption at our option is applicable to your debt securities and that a make-whole redemption applies, and unless your prospectus supplement specifies different terms relating to redemption at our option or notice periods:

- (1) we may redeem your debt securities in whole at any time or in part from time to time, prior to a specified final redemption date, upon (i) in the case of debt securities issued prior to July 1, 2020, not less than 30 days' nor more than 60 days' prior written notice or (ii) in the case of debt securities issued on or after July 1, 2020, not less than 15 days' nor more than 60 days' prior written notice, at a redemption price equal to the greater of (A) 100% of the principal amount of the debt securities to be redeemed or (B) as determined by the quotation agent described below, the sum of the present values of the remaining scheduled payments of principal and interest on the debt securities to be redeemed, not including any portion of these payments of interest accrued as of the date on which the debt securities are to be redeemed, discounted to the date on which the debt securities are to be redeemed on a semi-annual basis, applying the 30/360 (ISDA) day count convention described above, at the treasury rate (as described below) plus a spread to be specified in the prospectus supplement, plus, in each case, accrued and unpaid interest to but excluding the redemption date; and
- (2) we may redeem your debt securities in whole at any time or in part from time to time, on or after the specified final redemption date, upon (i) in the case of debt securities issued prior to

Table of Contents

July 1, 2020, not less than 30 days' nor more than 60 days' prior written notice or (ii) in the case of debt securities issued on or after July 1, 2020, not less than 15 days' nor more than 60 days' prior written notice, at a redemption price equal to 100% of the principal amount of the debt securities being redeemed plus accrued and unpaid interest to but excluding the redemption date.

If your prospectus supplement specifies that redemption at our option is applicable to your debt securities but does not specify that a make-whole redemption applies, and unless your prospectus supplement specifies different terms relating to redemption at our option or notice periods, we may redeem your debt securities in whole at any time or in part from time to time, upon (i) in the case of debt securities issued prior to July 1, 2020, not less than 30 days' nor more than 60 days' prior written notice or (ii) in the case of debt securities issued on or after July 1, 2020, not less than 15 days' nor more than 60 days' prior written notice, at a redemption price equal to 100% of the principal amount of the debt securities being redeemed plus accrued and unpaid interest to but excluding the redemption date.

The "treasury rate" will be:

- the average of the yields for the five business days prior to the date of calculation, appearing in the most recently published statistical release appearing on the website of the Board of Governors of the Federal Reserve System or in another recognized electronic source, in each case as determined by the quotation agent in its sole discretion, and which establishes yields on actively traded U.S. Treasury securities adjusted to constant maturity, for the maturity most closely corresponding to the remaining term of the debt securities to be redeemed, or if no maturity is within three months before or after this time period, yields for the two published maturities most closely corresponding to this time period will be determined and the treasury rate will be interpolated or extrapolated from those yields on a straight-line basis, rounding to the nearest month; or
- if the release or any successor release is not published during the five business days preceding the calculation date or does not contain such yields, the annual rate equal to the semi-annual equivalent yield to maturity of the comparable treasury issue (as described below), calculated using a price for the comparable treasury issue, expressed as a percentage of its principal amount, equal to the comparable treasury price (as described below) for the redemption date.

The treasury rate will be calculated on the third business day preceding the redemption date.

Unless otherwise specified in your prospectus supplement, we will initially appoint GS&Co. or its successor to act as our quotation agent. However, if GS&Co. ceases to be a primary U.S. Government securities dealer in New York City, we will appoint another primary U.S. Government securities dealer as our quotation agent.

The "comparable treasury issue", with respect to any redemption date, means the United States Treasury security selected by the quotation agent as being the most recently issued United States Treasury note or bond as displayed by Bloomberg L.P. (or any successor service) on screens PX1 through PX8 (or any other screens as may replace such screens on such service) that has a remaining term comparable to the remaining term of the debt securities to be redeemed.

The "comparable treasury price", with respect to any redemption date, will be (1) the average of five reference treasury dealer quotations (as described below) for such redemption date, after excluding the highest and lowest of such reference treasury dealer quotations, or (2) if the quotation agent obtains fewer than five such reference treasury dealer quotations, the average of all such quotations.

Table of Contents

The “reference treasury dealer quotations”, with respect to each reference treasury dealer (as described below) and any redemption date, means the average, as determined by the quotation agent, of the bid and ask prices for the comparable treasury issue, expressed in each case as a percentage of its principal amount, quoted in writing to the quotation agent by such reference treasury dealer at 5:00 p.m., New York City time, on the third business day preceding such redemption date.

The “reference treasury dealer” will be (1) the quotation agent or (2) any other primary U.S. Government securities dealer selected by the quotation agent after consultation with us.

If we exercise an option to redeem any debt security, we will give to the holder written notice of the principal amount of the debt security to be redeemed, not less than 30 days nor more than 60 days before the applicable redemption date, unless your prospectus supplement provides a different notice period. We will give the notice in the manner described below in “— Notices”.

Street name and other indirect owners should contact their banks or brokers for information about how to exercise a repayment right in a timely manner.

We or our affiliates may purchase debt securities from investors who are willing to sell from time to time, either in the open market at prevailing prices or in private transactions at negotiated prices. Debt securities that we or they purchase may, at our discretion, be held, resold or canceled.

Mergers and Similar Transactions

We are generally permitted to merge or consolidate with another corporation or other entity. We are also permitted to sell our assets substantially as an entirety to another corporation or other entity. With regard to any series of debt securities, however, we may not take any of these actions unless all the following conditions are met:

- If the successor entity in the transaction is not The Goldman Sachs Group, Inc., the successor entity must be organized as a corporation, partnership or trust and must expressly assume our obligations under the debt securities of that series and the underlying debt indenture with respect to that series. The successor entity may be organized under the laws of any jurisdiction, whether in the United States or elsewhere.
- Immediately after the transaction, no default under the debt securities of that series has occurred and is continuing. For this purpose, “default under the debt securities of that series” means an event of default (or, with respect to any series of securities issued on or after January 1, 2017 under the 2008 indenture, a covenant breach) with respect to that series or any event that would be an event of default (or covenant breach) with respect to that series if the requirements for giving us default (or breach) notice and for our default (or breach) having to continue for a specific period of time were disregarded. We describe these matters below under “— Default, Remedies and Waiver of Default”.

If the conditions described above are satisfied with respect to the debt securities of any series, we will not need to obtain the approval of the holders of those debt securities in order to merge or consolidate or to sell our assets. Also, these conditions will apply only if we wish to merge or consolidate with another entity or sell our assets substantially as an entirety to another entity. We will not need to satisfy these conditions if we enter into other types of transactions, including any transaction in which we acquire the stock or assets of another entity, any transaction that involves a change of control of The Goldman Sachs Group, Inc. but in which we do not merge or consolidate and any transaction in which we sell less than substantially all our assets.

Table of Contents

Also, if we merge, consolidate or sell our assets substantially as an entirety and the successor is a non-U.S. entity, neither we nor any successor would have any obligation to compensate you for any resulting adverse tax consequences relating to your debt securities.

Notwithstanding the foregoing and for the avoidance of doubt, with regard to any securities of any series issued on or after January 1, 2017 under the 2008 indenture or any securities of any series issued after July 7, 2017 under the subordinated debt indenture, we may sell or transfer our assets substantially as an entirety, in one or more transactions, to one or more entities, provided that the assets of The Goldman Sachs Group, Inc. and its direct or indirect subsidiaries in which it owns a majority of the combined voting power, taken together, are not sold or transferred substantially as an entirety to one or more entities that are not such subsidiaries.

Subordination Provisions

Holders of subordinated debt securities should recognize that contractual provisions in the subordinated debt indenture may prohibit us from making payments on those securities. Subordinated debt securities are subordinate and junior in right of payment, to the extent and in the manner stated in the subordinated debt indenture, to all of our “senior debt”, including all debt securities we have issued and will issue under either of the senior debt indentures and all warrants we will issue under the warrant indenture.

The ninth supplemental subordinated debt indenture to our subordinated debt indenture, which is applicable to all of our subordinated debt securities issued in or after 2015, defines “senior debt” as (i) all indebtedness and obligations of, or guaranteed or assumed by, The Goldman Sachs Group, Inc. that are for borrowed money or evidenced by bonds, debentures, notes or other similar instruments, whether existing now or in the future, (ii) obligations of The Goldman Sachs Group, Inc. that are similar to those in clause (i) above and arise from off-balance sheet guarantees and direct credit substitutes, and (iii) all obligations of The Goldman Sachs Group, Inc. associated with derivative products such as interest rate and foreign exchange contracts, commodity contracts and similar arrangements, and, in each case, all amendments, renewals, extensions, modifications and refundings of any indebtedness or obligations of that kind. Senior debt excludes the subordinated debt securities and any other indebtedness or obligations specifically designated as being subordinate, or not superior, in right of payment to the subordinated debt securities.

For purposes of our subordinated debt securities issued prior to 2015, “senior debt” is defined as all indebtedness and obligations of, or guaranteed or assumed by, The Goldman Sachs Group, Inc. for borrowed money or evidenced by bonds, debentures, notes or other similar instruments, whether existing now or in the future, and all amendments, renewals, extensions, modifications and refundings of any indebtedness or obligations of that kind. Senior debt excludes the subordinated debt securities and any other indebtedness or obligations specifically designated as being subordinate, or not superior, in right of payment to the subordinated debt securities.

We may modify the subordination provisions, including the definition of senior debt, with respect to one or more series of subordinated debt securities. For a description of these modifications, see the applicable prospectus supplement.

The subordinated debt indenture provides that, unless all principal of and any premium or interest on the senior debt has been paid in full, no payment or other distribution may be made in respect of any subordinated debt securities in the following circumstances:

- in the event of any insolvency or bankruptcy proceedings, or any receivership, liquidation, reorganization, assignment for creditors or other similar proceedings or events involving us or our assets;

Table of Contents

- (a) in the event and during the continuation of any default in the payment of principal, premium or interest on any senior debt beyond any applicable grace period or (b) in the event that any event of default with respect to any senior debt has occurred and is continuing, permitting the holders of that senior debt (or a trustee) to accelerate the maturity of that senior debt, whether or not the maturity is in fact accelerated (unless, in the case of (a) or (b), the payment default or event of default has been cured or waived or ceased to exist and any related acceleration has been rescinded) or (c) in the event that any judicial proceeding is pending with respect to a payment default or event of default described in (a) or (b); or
- in the event that any subordinated debt securities have been declared due and payable before their stated maturity.

Holders of the subordinated debt securities may be fully subordinated to interests held by the U.S. government or other creditors in the event that we enter into a receivership, insolvency, liquidation or similar proceeding.

If the trustee under the subordinated debt indenture or any holders of the subordinated debt securities receive any payment or distribution that is prohibited under the subordination provisions, then the trustee or the holders will have to repay that money to the holders of the senior debt.

Even if the subordination provisions prevent us from making any payment when due on the subordinated debt securities of any series we will be in default on our obligations under that series if we do not make the payment when due. This means that the trustee under the subordinated debt indenture and the holders of that series can take action against us, but they will not receive any money until the claims of the holders of senior debt have been fully satisfied.

The subordinated debt indenture allows the holders of senior debt to obtain a court order requiring us and any holder of subordinated debt securities to comply with the subordination provisions.

The subordinated debt securities also have limited acceleration rights. In future subordinated debt securities issuances, unless otherwise provided in your prospectus supplement, there will not be any events of default except in the event of our bankruptcy, insolvency, receivership or reorganization. Therefore, the maturity of the subordinated debt securities would be accelerated only upon our bankruptcy, receivership, insolvency, or reorganization. Unless otherwise provided in your prospectus supplement, there will be no right of acceleration of the payment of principal of the subordinated debt securities upon a default in the payment of principal, interest or any other amount (including upon redemption) on the subordinated debt securities or in the performance of any of our covenants or agreements contained in the subordinated debt securities or in our subordinated debt indenture. No such payment or performance default will result in an event of default under the subordinated debt securities or permit any holders or the trustee to take action to enforce the subordinated debt securities or the subordinated debt indenture, except that a holder will be entitled at any time to bring a lawsuit for the payment of money due on the subordinated debt securities of such holder.

Restriction on Liens

In each of the senior debt indentures, we promise, with respect to each series of senior debt securities, not to create, assume, incur or guarantee any debt for borrowed money that is secured by a lien on the voting or profit participating equity ownership interests that we or any of our subsidiaries own in GS&Co., or in any subsidiary that beneficially owns or holds, directly or indirectly, those interests in GS&Co., unless we also secure the senior debt securities of that series on an equal or priority basis with the other secured debt. Our promise, however, is subject to an important exception: we may secure debt for borrowed money with liens on those interests without securing the senior debt securities of any series if our board of directors determines that the liens do not materially detract from or interfere with the value or control of those interests, as of the date of the determination.

The subordinated debt indenture does not include the promise described in the preceding paragraph.

Except as noted above, none of the indentures restrict our ability to put liens on our interests in our subsidiaries other than GS&Co., nor do the indentures restrict our ability to sell or otherwise dispose of our interests in any of our subsidiaries, including GS&Co. In addition, the restriction on liens in each of the senior debt indentures applies only to liens that secure debt for borrowed money. For example, liens imposed by operation of law, such as liens to secure statutory obligations for taxes or workers' compensation benefits, or liens we create to secure obligations to pay legal judgments or surety bonds, would not be covered by this restriction.

Defeasance and Covenant Defeasance

Unless we say otherwise in the applicable prospectus supplement, the provisions for full defeasance and covenant defeasance described below apply to each senior debt security, but not to subordinated debt securities. In general, we expect these provisions to apply to each senior debt security that has a specified currency of U.S. dollars and is not an indexed debt security.

Full Defeasance. If there is a change in U.S. federal tax law, as described below, we can legally release ourselves from all payment and other obligations on any senior debt securities. This is called full defeasance. For us to do so, each of the following must occur:

- We must deposit in trust for the benefit of all holders of those senior debt securities money or a combination of money and U.S. government or U.S. government agency notes or bonds that will generate enough cash to make interest, principal and any other payments on those senior debt securities on their various due dates;
- There must be a change in current U.S. federal tax law or an Internal Revenue Service ruling that lets us make the above deposit without causing the holders to be taxed on those senior debt securities any differently than if we did not make the deposit and just repaid those senior debt securities ourselves. Under current federal tax law, the deposit and our legal release from your senior debt security would be treated as though we took back your senior debt security and gave you your share of the cash and notes or bonds deposited in trust. In that event, you could recognize gain or loss on your senior debt security; and
- We must deliver to the trustee a legal opinion of our counsel confirming the tax law change described above.

If we ever fully defeased your senior debt security, you would have to rely solely on the trust deposit for payments on your senior debt security. You would not be able to look to us for payment in the event of any shortfall.

Covenant Defeasance. Under current U.S. federal tax law, we can make the same type of deposit described above and be released from the restriction on liens described under “— Restriction on Liens” above and any other restrictive covenants relating to your senior debt security that may be described in your prospectus supplement. This is called covenant defeasance. In that event, you would lose the protection of those restrictive covenants. In order to achieve covenant defeasance for any senior debt securities, we must do both of the following:

- We must deposit in trust for the benefit of the holders of those senior debt securities money or a combination of money and U.S. government or U.S. government agency notes or bonds that will generate enough cash to make interest, principal and any other payments on those senior debt securities on their various due dates; and

Table of Contents

- We must deliver to the trustee a legal opinion of our counsel confirming that under current U.S. federal income tax law we may make the above deposit without causing the holders to be taxed on those senior debt securities any differently than if we did not make the deposit and just repaid those senior debt securities ourselves.

If we accomplish covenant defeasance with regard to your senior debt security, the following provisions of the applicable senior debt indenture and your senior debt security would no longer apply:

- Our promise not to create liens on our voting or profit participating equity ownership interests in GS&Co. described above under “— Restriction on Liens”;
- Any additional covenants that your prospectus supplement may state are applicable to your senior debt security; and
- Any events of default or covenant breaches resulting from a breach of the covenants referred to in the two prior bullets (see “— Default, Remedies and Waiver of Default — Events of Default” and “— Covenant Breaches” below).

Any right we have to redeem will survive covenant defeasance with regard to those senior debt securities.

If we accomplish covenant defeasance on your senior debt security, you can still look to us for repayment of your senior debt security in the event of any shortfall in the trust deposit. You should note, however, that if one of the remaining events of default occurred, such as our bankruptcy, and your senior debt security became immediately due and payable, there may be a shortfall. Depending on the event causing the default, you may not be able to obtain payment of the shortfall.

Default, Remedies and Waiver of Default

You will have special rights if an event of default or a covenant breach with respect to your debt securities occurs and is continuing, as described in this subsection.

For securities issued under the 2008 indenture on or after January 1, 2017, and solely for the purposes of this section entitled “— Default, Remedies and Waiver of Default”, the term “series” refers to debt securities with the same CUSIP number.

Events of Default

Securities Issued on or After January 1, 2017 Under the 2008 Indenture

Unless your prospectus supplement says otherwise, when we refer to an event of default with respect to the debt securities of any series issued on or after January 1, 2017 under the 2008 indenture, we mean any of the following:

- We do not pay the principal or any premium on any debt security of that series within 30 days after the due date;
- We do not pay interest on any debt security of that series within 30 days after the due date;
- We file for bankruptcy or other events of bankruptcy, insolvency or reorganization relating to The Goldman Sachs Group, Inc. occur. Those events must arise under U.S. federal or state law, unless we merge, consolidate or sell our assets as described above and the successor firm is a non-U.S. entity. If that happens, then those events must arise under U.S. federal or state law or the law of the jurisdiction in which the successor firm is legally organized; or

Table of Contents

- If the applicable prospectus supplement states that any additional event of default applies to the series, that event of default occurs.

For securities issued under the 2008 indenture on or after January 1, 2017, no other defaults under or breaches of the 2008 indenture or any securities will result in an event of default, whether after notice, the passage of time or otherwise. However, certain events may give rise to a covenant breach, as described below under “— Covenant Breaches”.

We may change, eliminate or add to the events of default with respect to any particular series or any particular debt security or debt securities within a series, as indicated in the applicable prospectus supplement.

Securities Issued Under the 1999 Indenture or Issued Before January 1, 2017 Under the 2008 Indenture

Unless your prospectus supplement says otherwise, when we refer to an event of default with respect to the debt securities of any series issued under the 1999 indenture or issued before January 1, 2017 under the 2008 indenture, we mean any of the following:

- We do not pay the principal or any premium on any debt security of that series on the due date;
- We do not pay interest on any debt security of that series within 30 days after the due date;
- We do not deposit a sinking fund payment with regard to any debt security of that series on the due date, but only if the payment is required under provisions described in the applicable prospectus supplement;
- We remain in breach of our covenant described above under “— Restriction on Liens” or any other covenant we make in the debt indenture for the benefit of that series, for 60 days after we receive a notice of default stating that we are in breach and requiring us to remedy the breach. The notice must be sent by the trustee or the holders of at least 10% in principal amount of that series of debt securities then outstanding;
- We file for bankruptcy or other events of bankruptcy, insolvency or reorganization relating to The Goldman Sachs Group, Inc. occur. Those events must arise under U.S. federal or state law, unless we merge, consolidate or sell our assets as described above and the successor firm is a non-U.S. entity. If that happens, then those events must arise under U.S. federal or state law or the law of the jurisdiction in which the successor firm is legally organized; or
- If the applicable prospectus supplement states that any additional event of default applies to the series, that event of default occurs.

We may change, eliminate or add to the events of default with respect to any particular series or any particular debt security or debt securities within a series, as indicated in the applicable prospectus supplement.

Securities Issued Under the Subordinated Debt Indenture

Unless your prospectus supplement says otherwise, when we refer to an event of default with respect to any series of subordinated debt securities issued under the subordinated debt indenture, we mean any of the following:

- We file for bankruptcy or other events of bankruptcy, insolvency or reorganization relating to The Goldman Sachs Group, Inc. occur. Those events must arise under U.S. federal or state

Table of Contents

law, unless we merge, consolidate or sell our assets as described above and the successor firm is a non-U.S. entity. If that happens, then those events must arise under U.S. federal or state law or the law of the jurisdiction in which the successor firm is legally organized; or

- If the applicable prospectus supplement states that any additional event of default applies to the series, that event of default occurs.

For subordinated debt securities, no other defaults under or breaches of the subordinated debt indenture or any securities will result in an event of default or covenant breach, whether after notice, the passage of time or otherwise.

We may change, eliminate, or add to the events of default with respect to any particular series or any particular debt security or debt securities within a series, as indicated in the applicable prospectus supplement.

Covenant Breaches

Unless your prospectus supplement says otherwise, when we refer to a covenant breach with respect to the debt securities of any series issued on or after January 1, 2017 under the 2008 indenture, we mean the following:

- We do not deposit a sinking fund payment with regard to any debt security of that series on the due date, but only if the payment is required under provisions described in the applicable prospectus supplement; or
- We remain in breach of any covenant we make in the debt indenture for the benefit of that series, for 60 days after we receive a notice of covenant breach stating that we are in breach and requiring us to remedy the breach. The notice must be sent by the trustee or the holders of at least 10% in principal amount of that series of debt securities then outstanding.

We may change the definition of covenant breach with respect to any particular series or any particular debt security or debt securities within a series, as indicated in the applicable prospectus supplement. A covenant breach shall not be an event of default with respect to any security.

Remedies If an Event of Default or Covenant Breach Occurs

Except as otherwise specified in the applicable prospectus supplement, if an event of default has occurred with respect to any series of debt securities and has not been cured or waived, the trustee or the holders of not less than 25% in principal amount of all debt securities of that series then outstanding may declare the entire principal amount of the debt securities of that series to be due immediately. Except as otherwise specified in the applicable prospectus supplement, if the event of default occurs because of events in bankruptcy, insolvency or reorganization relating to The Goldman Sachs Group, Inc., the entire principal amount of the debt securities of that series will be automatically accelerated, without any action by the trustee or any holder.

Each of the situations described above is called an acceleration of the stated maturity of the affected series of debt securities. Except as otherwise specified in the applicable prospectus supplement, if the stated maturity of any series is accelerated and a judgment for payment has not yet been obtained, the holders of a majority in principal amount of the debt securities of that series may cancel the acceleration for the entire series.

Table of Contents

For debt securities issued on or after January 1, 2017 under the 2008 indenture, acceleration will not be permitted for reasons other than a specified payment default or insolvency event that constitutes an event of default in respect of such securities. Neither the trustee nor any holders of such securities will have any enforcement right or other remedy in respect of covenant breaches (including breaches of the covenant described above under “— Mergers and Similar Transactions”) except as described below.

For subordinated debt securities, acceleration will not be permitted for reasons other than a specified insolvency event that constitutes an event of default in respect of such securities; neither the trustee nor any holders of such securities will have any enforcement right or other remedy in respect of any other defaults under or breach of the subordinated debt indenture or any securities except as described below. In addition, all the remedies available upon the occurrence of an event of default under the subordinated debt indenture will be subject to the restrictions on the subordinated debt securities described above under “— Subordination Provisions”.

If an event of default (or, with respect to securities issued on or after January 1, 2017 under the 2008 indenture, a covenant breach) occurs, the trustee will have special duties. In that situation, the trustee will be obligated to use those of its rights and powers under the relevant debt indenture, and to use the same degree of care and skill in doing so, that a prudent person would use in that situation in conducting his or her own affairs.

Except as described in the prior paragraph, the trustee is not required to take any action under the relevant debt indenture at the request of any holders unless the holders offer the trustee reasonable protection from expenses and liability. This is called an indemnity. If the trustee is provided with an indemnity reasonably satisfactory to it, the holders of a majority in principal amount of all debt securities of the relevant series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee with respect to that series. These majority holders may also direct the trustee in performing any other action under the applicable debt indenture with respect to the debt securities of that series.

Before you bypass the trustee and bring your own lawsuit or other formal legal action or take other steps to enforce your rights or protect your interests relating to any debt security, all of the following must occur:

- The holder of your debt security must give the trustee written notice that an event of default (or, with respect to securities issued on or after January 1, 2017 under the 2008 indenture, a covenant breach) has occurred, and the event of default (or covenant breach) must not have been cured or waived;
- The holders of not less than 25% in principal amount of all debt securities of your series must make a written request that the trustee take action because of the default (or breach), and they or other holders must offer to the trustee indemnity reasonably satisfactory to the trustee against the cost and other liabilities of taking that action;
- The trustee must not have taken action for 60 days after the above steps have been taken; and
- During those 60 days, the holders of a majority in principal amount of the debt securities of your series must not have given the trustee directions that are inconsistent with the written request of the holders of not less than 25% in principal amount of the debt securities of your series.

You are entitled at any time, however, to bring a lawsuit for the payment of money due on your debt security on or after its stated maturity (or, if your debt security is redeemable, on or after its redemption date).

Waiver of Default

The holders of not less than a majority in principal amount of the debt securities of any series may waive a default for all debt securities of that series. If this happens, the default will be treated as if it has not occurred. No one can waive a payment default on your debt security, however, without the approval of the particular holder of that debt security. For the purpose of this paragraph, the term “default” means any event which is, or after notice or lapse of time or both would become, an event of default or covenant breach in respect of the relevant securities.

We Will Give the Trustee Information About Defaults Annually

We will furnish to each trustee every year a written statement of two of our officers certifying that to their knowledge we are in compliance with the applicable debt indenture and the debt securities issued under it, or else specifying any default under the relevant debt indenture. For the purpose of this paragraph, the term “default” means any event which is, or after notice or lapse of time or both would become, an event of default or covenant breach in respect of the relevant securities.

Book-entry and other indirect owners should consult their banks or brokers for information on how to give notice or direction to or make a request of the trustee and how to declare or cancel an acceleration of the stated maturity of a series of debt securities. Book-entry and other indirect owners are described below under “Legal Ownership and Book-Entry Issuance”.

Modification of the Debt Indentures and Waiver of Covenants

There are four types of changes we can make to our debt indentures and the debt securities or series of debt securities issued under a particular debt indenture.

Changes Requiring Each Holder’s Approval

First, there are changes that cannot be made without the approval of the holder of each debt security affected by the change under the applicable debt indenture. Here is a list of those types of changes:

- change the stated maturity for any principal or interest payment on a debt security;
- reduce the principal amount, the amount payable on acceleration of the stated maturity after a default, the interest rate or the redemption price for a debt security;
- permit redemption of a debt security if not previously permitted;
- impair any right a holder may have to require repayment of its debt security;
- impair any right that a holder of an indexed or any other debt security may have to convert the debt security for or into securities;
- change the currency of any payment on a debt security;
- change the place of payment on a debt security;
- impair a holder’s right to sue for payment of any amount due on its debt security;
- reduce the percentage in principal amount of the debt securities of any one or more affected series, taken separately or together, as applicable, and whether comprising the same or different series or less than all of the debt securities of a series, the approval of whose holders is needed to change the debt indenture or those debt securities;
- reduce the percentage in principal amount of the debt securities of any one or more affected series, taken separately or together, as applicable, and whether comprising the same or

Table of Contents

different series or less than all of the debt securities of a series, the consent of whose holders is needed to waive our compliance with the applicable debt indenture or to waive defaults; and

- change the provisions of the applicable debt indenture dealing with modification and waiver in any other respect, except to increase any required percentage referred to above or to add to the provisions that cannot be changed or waived without approval of the holder of each affected debt security.

Changes Not Requiring Approval

The second type of change does not require any approval by holders of the debt securities affected. These changes are limited to clarifications and changes that would not adversely affect any debt securities of any series in any material respect. Nor do we need any approval to make changes that affect only debt securities to be issued under the applicable debt indenture after the changes take effect.

We may also make changes or obtain waivers that do not adversely affect a particular debt security, even if they affect other debt securities. In those cases, we do not need to obtain the approval of the holder of the unaffected debt security; we need only obtain any required approvals from the holders of the affected debt securities.

Modification of Subordination Provisions

We may not amend the subordinated debt indenture to alter the subordination of any outstanding subordinated debt securities without the written consent of each holder of senior debt then outstanding who would be adversely affected. In addition, we may not modify the subordination provisions of the subordinated debt indenture in a manner that would adversely affect the subordinated debt securities of any one or more series then outstanding in any material respect, without the consent of the holders of a majority in aggregate principal amount of all affected series then outstanding, voting together as one class (and also of any affected series that by its terms is entitled to vote separately as a series as described below).

Changes Requiring Majority Approval

Any other change to the 1999 indenture or the subordinated debt indenture and the debt securities issued under either such debt indenture would require the following approval:

- If the change affects only the debt securities of a particular series it must be approved by the holders of a majority in principal amount of the debt securities of that series.
- If the change affects the debt securities of more than one series of debt securities issued under the same debt indenture, it must be approved by the holders of a majority in principal amount of all such series affected by the change, with the debt securities of all the affected series voting together as one class for this purpose (and of any affected series that by its terms is entitled to vote separately as a class as described below).

On the other hand, any other change to the 2008 indenture and the debt securities issued under that debt indenture would require the following approval:

- If the change affects only particular debt securities within a series, it must be approved by the holders of a majority in principal amount of such particular debt securities.
- If the change affects multiple debt securities of one or more series, it must be approved by the holders of a majority in principal amount of all debt securities affected by the change, with all

[**Table of Contents**](#)

such affected debt securities voting together as one class for this purpose (and by the holders of a majority in principal amount of any affected debt securities that by their terms are entitled to vote separately as described below).

In each case, the required approval must be given by written consent.

This would mean that modification of terms with respect to certain securities of a series issued under the 2008 indenture could be effectuated without obtaining the consent of the holders of a majority in principal amount of other securities of such series that are not affected by such modification.

The same majority approval would be required for us to obtain a waiver of any of our covenants in any debt indenture. Our covenants include the promises we make about merging and putting liens on our interests in GS&Co., which we describe above under “— Mergers and Similar Transactions” and “— Restriction on Liens”, and which, in the latter case, are only for the benefit of the holders of our senior debt securities. If the holders approve a waiver of a covenant, we will not have to comply with it. The holders, however, cannot approve a waiver of any provision in a particular debt security, or in the applicable debt indenture as it affects that debt security, that we cannot change without the approval of the holder of that debt security as described above in “— Changes Requiring Each Holder’s Approval”, unless that holder approves the waiver.

Book-entry and other indirect owners should consult their banks or brokers for information on how approval may be granted or denied if we seek to change a debt indenture or any debt securities or request a waiver.

Special Rules for Action by Holders

When holders take any action under any of our debt indentures, such as giving a notice of default, notice of covenant breach, declaring an acceleration, approving any change or waiver or giving the trustee an instruction, we will apply the following rules.

Only Outstanding Debt Securities Are Eligible

Only holders of outstanding debt securities or the outstanding debt securities of the applicable series, as applicable, will be eligible to participate in any action by holders of such debt securities or the debt securities of that series. Also, we will count only outstanding debt securities in determining whether the various percentage requirements for taking action have been met. For these purposes, a debt security will not be “outstanding” if:

- it has been surrendered for cancellation;
- we have deposited or set aside, in trust for its holder, money for its payment or redemption;
- we have fully defeased it as described above under “— Defeasance and Covenant Defeasance — Full Defeasance”; or
- we or one of our affiliates, such as GS&Co., is the owner.

Special Class Voting Rights

We may issue particular debt securities or a particular series of debt securities, as applicable, that are entitled, by their terms, to vote separately on matters (for example, modification or waiver of provisions in the applicable debt indenture) that would otherwise require a vote of all affected debt securities or all affected series voting together as a single class. Any such debt securities or series of

[Table of Contents](#)

debt securities would be entitled to vote together with all other affected debt securities or affected series voting together as one class, and would also be entitled to vote separately as a class only. In some cases, other parties may be entitled to exercise these special voting rights on behalf of the holders of the relevant debt securities or the relevant series. For debt securities or series of debt securities that have these rights, the rights will be described in the applicable prospectus supplement. For debt securities or series of debt securities that do not have these special rights, voting will occur as described in the preceding section, but subject to any separate voting rights of any other debt securities or series of debt securities having special rights.

We may issue series having these or other special voting rights without obtaining the consent of or giving notice to holders of outstanding debt securities or series.

Eligible Principal Amount of Some Debt Securities

In some situations, we may follow special rules in calculating the principal amount of debt securities that are to be treated as outstanding for the purposes described above. This may happen, for example, if the principal amount is payable in a non-U.S. dollar currency, increases over time or is not to be fixed until maturity.

For any debt security of the kind described below, we will decide how much principal amount to attribute to the debt security as follows:

- For an original issue discount debt security, we will use the principal amount that would be due and payable on the action date if the maturity of the debt security were accelerated to that date because of a default;
- For a debt security whose principal amount is not known, we will use any amount that we indicate in the prospectus supplement for that debt security. The principal amount of a debt security may not be known, for example, because it is based on an index that changes from time to time and the principal amount is not to be determined until a later date; or
- For debt securities with a principal amount denominated in one or more non-U.S. dollar currencies or currency units, we will use the U.S. dollar equivalent, which we will determine.

Determining Record Dates for Action by Holders

We will generally be entitled to set any day as a record date for the purpose of determining the holders that are entitled to take action under a particular debt indenture. In certain limited circumstances, only the trustee will be entitled to set a record date for action by holders. If we or the trustee set a record date for an approval or other action to be taken by holders, that vote or action may be taken only by persons or entities who are holders on the record date and must be taken during the period that we specify for this purpose, or that the trustee specifies if it sets the record date. We or the trustee, as applicable, may shorten or lengthen this period from time to time. This period, however, may not extend beyond the 180th day after the record date for the action. In addition, record dates for any global debt security may be set in accordance with procedures established by the depositary from time to time. Accordingly, record dates for global debt securities may differ from those for other debt securities.

Form, Exchange and Transfer of Debt Securities

If any debt securities cease to be issued in registered global form, they will be issued:

- only in fully registered form;
- without interest coupons; and

Table of Contents

- unless we indicate otherwise in your prospectus supplement, in denominations of \$1,000 and integral multiples of \$1,000 in excess thereof.

Holders may exchange their debt securities for debt securities of smaller denominations or combined into fewer debt securities of larger denominations, as long as the total principal amount is not changed. You may not exchange your debt securities for securities of a different series or having different terms, unless your prospectus supplement says you may.

Holders may exchange or transfer their debt securities at the office of the trustee. They may also replace lost, stolen, destroyed or mutilated debt securities at that office. We have appointed the trustee to act as our agent for registering debt securities in the names of holders and transferring and replacing debt securities. We may appoint another entity to perform these functions or perform them ourselves.

Holders will not be required to pay a service charge to transfer or exchange their debt securities, but they may be required to pay for any tax or other governmental charge associated with the exchange or transfer. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder’s proof of legal ownership. The transfer agent may require an indemnity before replacing any debt securities.

If we have designated additional transfer agents for your debt security, they will be named in your prospectus supplement. We may appoint additional transfer agents or cancel the appointment of any particular transfer agent. We may also approve a change in the office through which any transfer agent acts.

If the debt securities of any series are redeemable and we redeem less than all those debt securities, we may block the transfer or exchange of those debt securities during the period beginning 15 calendar days before the day we mail the notice of redemption and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any debt security selected for redemption, except that we will continue to permit transfers and exchanges of the unredeemed portion of any debt security being partially redeemed.

If a debt security is issued as a global debt security, only the depositary — e.g., DTC, Euroclear or Clearstream — will be entitled to transfer and exchange the debt security as described in this subsection, since the depositary will be the sole holder of the debt security.

The rules for exchange described above apply to exchange of debt securities for other debt securities of the same series and kind. If a debt security is convertible, exercisable or exchangeable into or for a different kind of security, such as one that we have not issued, or for other property, the rules governing that type of conversion, exercise or exchange will be described in the applicable prospectus supplement.

Payment of Additional Amounts

We intend to make all payments on the debt securities without deducting U.S. withholding taxes unless the law requires us to deduct withholding taxes. The remainder of this subsection does not apply unless the relevant prospectus supplement specifies that this subsection entitled “— Payment of Additional Amounts” is applicable to your debt securities.

If we are required by law to deduct U.S. withholding taxes on payments to non-U.S. investors and if so specified in your prospectus supplement, we will pay additional amounts on those payments to the extent described in this subsection.

[Table of Contents](#)

We will pay additional amounts on a debt security only if the beneficial owner of the debt security is a United States alien. The term “United States alien” means any person who, for U.S. federal income tax purposes, is:

- a nonresident alien individual;
- a foreign corporation;
- a foreign partnership one or more of the members of which is, for U.S. federal income tax purposes, a foreign corporation, a nonresident alien individual or a nonresident alien fiduciary of a foreign estate or trust; or
- a nonresident alien fiduciary of an estate or trust that is not subject to U.S. federal income tax on a net income basis on income or gain from a debt security.

If the beneficial owner of a debt security is a United States alien, we will pay all additional amounts that may be necessary so that every net payment of interest or principal on that debt security will not be less than the amount provided for in that debt security. By net payment, we mean the amount we or our paying agent pays after deducting or withholding an amount for or on account of any present or future tax, assessment or other governmental charge imposed with respect to that payment by a U.S. taxing authority.

Our obligation to pay additional amounts is subject to several important exceptions, however. We will **not** pay additional amounts for or on account of any of the following:

- any tax, assessment or other governmental charge imposed solely because at any time there is or was a connection between the beneficial owner — or between a fiduciary, settlor, beneficiary, shareholder or member of the beneficial owner, if the beneficial owner is an estate, trust, partnership or corporation — and the United States (other than the mere receipt of a payment or the ownership or holding of a debt security), including because the beneficial owner — or the fiduciary, settlor, beneficiary, shareholder or member — at any time, for U.S. federal income tax purposes:
 - is or was a citizen or resident or is or was treated as a resident of the United States;
 - is or was present in the United States;
 - is or was engaged in a trade or business in the United States;
 - has or had a permanent establishment in the United States;
 - is or was a personal holding company, a passive foreign investment company or a controlled foreign corporation;
 - is or was a corporation that accumulates earnings to avoid U.S. federal income tax; or
 - is or was the owner or deemed owner of ten percent or more of the total combined voting power of all classes of the stock of The Goldman Sachs Group, Inc., entitled to vote;
- any tax, assessment or other governmental charge imposed solely because of a change in applicable law or regulation, or in any official interpretation or application of applicable law or regulation, that becomes effective more than 15 days after the day on which the payment becomes due or is duly provided for, whichever occurs later;
- any estate, inheritance, gift, sales, excise, transfer, wealth or personal property tax, or any similar tax, assessment or other governmental charge;
- any tax, assessment or other governmental charge imposed solely because the beneficial holder or any other person fails to comply with any certification, identification or other

Table of Contents

reporting requirement concerning the nationality, residence, identity or connection with the United States of the holder or any beneficial owner of the debt security, if compliance is required by statute or by regulation of the U.S. Treasury department or by an applicable income tax treaty to which the United States is a party, as a precondition to exemption from such tax, assessment or other governmental charge;

- any tax, assessment or other governmental charge that can be paid other than by deduction or withholding from a payment on the debt securities;
- any tax, assessment or other governmental charge imposed solely because the payment is to be made by a particular paying agent (including The Goldman Sachs Group, Inc.) and would not be imposed if made by another paying agent;
- any tax, assessment or other governmental charge imposed solely because the holder (1) is a bank purchasing the debt security in the ordinary course of its lending business or (2) is a bank that is neither (A) buying the debt security for investment purposes only nor (B) buying the debt security for resale to a third party that either is not a bank or holding the debt security for investment purposes only; or
- any combination of the taxes, assessments or other governmental charges described above.

In addition, we will not pay additional amounts with respect to any payment of principal, or interest to any United States alien who is a fiduciary or a partnership, or who is not the sole beneficial owner of the payment, to the extent that we would not have to pay additional amounts to any beneficiary or settlor of the fiduciary or any member of the partnership, or to any beneficial owner of the payment, if that person or entity were treated as the beneficial owner of the debt security for these purposes.

In addition, any amounts to be paid on the debt securities will be paid net of any deduction or withholding imposed or required pursuant to Sections 1471 through 1474 of the U.S. Internal Revenue Code (the “Code”), any current or future regulations or official interpretations thereof, any agreement entered into pursuant to Section 1471(b) of the Code, or any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement entered into in connection with the implementation of such Sections of the Code, and no additional amounts will be required to be paid on account of any such deduction or withholding.

When we refer to a “U.S. taxing authority” in this subsection and “— Redemption and Repayment” above, we mean the United States of America or any state, other jurisdiction or taxing authority in the United States. When we refer to the “United States”, we mean the United States of America, including the states and the District of Columbia, together with the territories, possessions and all those areas subject to the jurisdiction of the United States of America.

When we refer to any payment of interest or principal on a debt security in this subsection, this includes any additional amount that may be payable as described above in respect of that payment.

Payment Mechanics for Debt Securities

Who Receives Payment?

If interest is due on a debt security on an interest payment date, we will pay the interest to the person in whose name the debt security is registered at the close of business on the regular record date relating to the interest payment date as described below under “— Payment and Record Dates for Interest”. If interest is due at maturity but on a day that is not an interest payment date, we will pay the interest to the person entitled to receive the principal of the debt security. If principal or another amount besides interest is due on a debt security at maturity, we will pay the amount to the holder of the debt

[Table of Contents](#)

security against surrender of the debt security at a proper place of payment or, in the case of a global debt security, in accordance with the applicable policies of the depositary, DTC, Euroclear or Clearstream, as applicable.

Payment and Record Dates for Interest

The dates on which interest will be payable will be specified in your prospectus supplement. Unless we specify otherwise in the applicable prospectus supplement, the regular record date relating to an interest payment date for any fixed rate debt security or floating rate debt security will be the 15th calendar day before that interest payment date. These record dates will apply regardless of whether a particular record date is a “business day”, as defined below. For the purpose of determining the holder at the close of business on a regular record date when business is not being conducted, the close of business will mean 5:00 P.M., New York City time, on that day.

Notwithstanding the foregoing, and unless specified otherwise in your prospectus supplement, the regular record date relating to an interest payment date for any debt security in book-entry or global form will be the day immediately prior to the day on which the interest payment is to be made (as such payment day may be adjusted under the applicable business day convention). This prior day will be the record date whether or not it is a business day.

Unless we specify otherwise in this prospectus or in the applicable prospectus supplement, the term “days” refers to calendar days.

How We Will Make Payments Due in U.S. Dollars

We will follow the practice described in this subsection when paying amounts due in U.S. dollars. Payments of amounts due in other currencies will be made as described in the next subsection.

Payments on Global Debt Securities. We will make payments on a global debt security in accordance with the applicable policies of the depositary as in effect from time to time. Under those policies, we will pay directly to the depositary, or its nominee, and not to any indirect owners who own beneficial interests in the global debt security. An indirect owner’s right to receive those payments will be governed by the rules and practices of the depositary and its participants, as described below in the section entitled “Legal Ownership and Book-Entry Issuance — What Is a Global Security?”.

Payments on Non-Global Debt Securities. We will make payments on a debt security in non-global, registered form as follows. We will pay interest that is due on an interest payment date by check mailed on the interest payment date to the holder at his or her address shown on the trustee’s records as of the close of business on the relevant regular record date. We will make all other payments by check or via wire transfer at the paying agent described below, against surrender of the debt security. All payments by check will be made in next-day funds — *i.e.*, funds that become available on the day after the check is cashed or wire transfer is completed.

Alternatively, if a non-global debt security has a principal amount of at least \$1,000,000 (or the equivalent in another currency) and the holder asks us to do so, we will pay any amount that becomes due on the debt security by wire transfer of immediately available funds to an account at a bank in New York City, on the due date. To request wire payment, the holder must give the paying agent appropriate wire transfer instructions at least five business days before the requested wire payment is due. In the case of any interest payment due on an interest payment date, the instructions must be given by the person or entity who is the holder on the relevant regular record date. In the case of any other payment, payment will be made only after the debt security is surrendered to the paying agent. Any wire instructions, once properly given, will remain in effect unless and until new instructions are given in the manner described above.

[Table of Contents](#)

Book-entry and other indirect owners should consult their banks or brokers for information on how they will receive payments on their debt securities.

How We Will Make Payments Due in Other Currencies

We will follow the practice described in this subsection when paying amounts that are due in a specified currency other than U.S. dollars.

Payments on Global Debt Securities. We will make payments on a global debt security in the applicable specified currency in accordance with the applicable policies as in effect from time to time of the depository, which will be DTC, Euroclear or Clearstream. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depository for all debt securities in global form.

Indirect owners of a global debt security denominated in a currency other than U.S. dollars should consult their banks or brokers for information on how to request payment in the specified currency in cases where holders have a right to do so.

Payments on Non-Global Debt Securities. Except as described in the last paragraph under this heading, we will make payments on debt securities in non-global form in the applicable specified currency. We will make these payments by wire transfer of immediately available funds to any account that is maintained in the applicable specified currency at a bank designated by the holder and is acceptable to us and the trustee. To designate an account for wire payment, the holder must give the paying agent appropriate wire instructions at least five business days before the requested wire payment is due. In the case of any interest payment due on an interest payment date, the instructions must be given by the person or entity who is the holder on the relevant regular record date. In the case of any other payment, the payment will be made only after the debt security is surrendered to the paying agent. Any instructions, once properly given, will remain in effect unless and until new instructions are properly given in the manner described above.

If a holder fails to give instructions as described above, we will notify the holder at the address in the trustee's records and will make the payment within five business days after the holder provides appropriate instructions. Any late payment made in these circumstances will be treated under the applicable debt indenture as if made on the due date, and no interest will accrue on the late payment from the due date to the date paid.

Although a payment on a debt security in non-global form may be due in a specified currency other than U.S. dollars, we will make the payment in U.S. dollars if your prospectus supplement specifies that holders may ask us to do so and you make such a request. To request U.S. dollar payment in these circumstances, the holder must provide appropriate written notice to the trustee at least five business days before the next due date for which payment in U.S. dollars is requested. In the case of any interest payment due on an interest payment date, the request must be made by the person or entity who is the holder on the relevant regular record date. Any request, once properly made, will remain in effect unless and until revoked by notice properly given in the manner described above.

Book-entry and other indirect owners of a debt security with a specified currency other than U.S. dollars should contact their banks or brokers for information about how to receive payments in the specified currency or in U.S. dollars.

[Table of Contents](#)

Conversion to U.S. Dollars. Unless otherwise indicated in your prospectus supplement, holders are not entitled to receive payments in U.S. dollars of an amount due in another currency, either on a global debt security or a non-global debt security.

If your prospectus supplement specifies that holders may request that we make payments in U.S. dollars of an amount due in another currency, the exchange rate agent described below will calculate the U.S. dollar amount the holder receives in the exchange rate agent’s discretion. A holder that requests payment in U.S. dollars will bear all associated foreign currency exchange costs, which will be deducted from the payment.

When the Specified Currency Is Not Available. If we are obligated to make any payment in a specified currency other than U.S. dollars, and the specified currency or any successor currency is not available to us due to circumstances beyond our control — such as the imposition of exchange controls or a disruption in the currency markets — we will be entitled to satisfy our obligation to make the payment in that specified currency by making the payment in U.S. dollars, on the basis of the exchange rate determined by the exchange rate agent described below, in its discretion.

The foregoing will apply to any debt security, whether in global or non-global form, and to any payment, including a payment at maturity. Any payment made under the circumstances and in a manner described above will not result in a default under any debt security or the applicable debt indenture.

Exchange Rate Agent. If we issue a debt security in a specified currency other than U.S. dollars, we will appoint a financial institution to act as the exchange rate agent and will name the institution initially appointed when the debt security is originally issued in the applicable prospectus supplement. We may select GS&Co. or another of our affiliates to perform this role. We may change the exchange rate agent from time to time after the original issue date of the debt security without your consent and without notifying you of the change.

All determinations made by the exchange rate agent will be in its sole discretion unless we state in the applicable prospectus supplement that any determination requires our approval. In the absence of manifest error, those determinations will be conclusive for all purposes and binding on you and us, without any liability on the part of the exchange rate agent.

Payment When Offices Are Closed

Unless specified otherwise in the applicable prospectus supplement, if any payment is due on a debt security on a day that is not a business day, we will make the payment on the next business day. Payments postponed to the next business day in this situation will be treated under the applicable debt indenture as if they were made on the original due date. Postponement of this kind will not result in a default under any debt security or the applicable debt indenture, and, unless otherwise specified on the applicable prospectus supplement, no interest will accrue on the postponed amount from the original due date to the next business day. The term business day has a special meaning, which we describe above under “— Payment and Record Dates for Interest”.

Paying Agent

We may appoint one or more financial institutions to act as our paying agents, at whose designated offices debt securities in non-global entry form may be surrendered for payment at their maturity. We call each of those offices a paying agent. We may add, replace or terminate paying agents from time to time. We may also choose to act as our own paying agent. Initially, we have appointed the trustee, at its corporate trust office in New York City, as the paying agent. We must notify the trustee of changes in the paying agents.

Unclaimed Payments

Regardless of who acts as paying agent, all money paid by us to a paying agent that remains unclaimed at the end of two years after the amount is due to a holder will be repaid to us. After that two-year period, the holder may look only to us for payment and not to the trustee, any other paying agent or anyone else.

Notices

Notices to be given to holders of a global debt security will be given only to the depositary, in accordance with its applicable policies as in effect from time to time. Notices to be given to holders of debt securities not in global form will be sent by mail to the respective addresses of the holders as they appear in the trustee’s records, and will be deemed given when mailed. Neither the failure to give any notice to a particular holder, nor any defect in a notice given to a particular holder, will affect the sufficiency of any notice given to another holder.

Book-entry and other indirect owners should consult their banks or brokers for information on how they will receive notices.

Our Relationship With the Trustee

The Bank of New York Mellon has provided commercial banking and other services for us and our affiliates in the past and may do so in the future. Among other things, The Bank of New York Mellon provides us with a line of credit, holds debt securities issued by us and serves as trustee or agent with regard to other debt obligations and warrants of The Goldman Sachs Group, Inc. or its subsidiaries.

The Bank of New York Mellon is initially serving as the trustee for the senior debt securities and subordinated debt securities and the warrants issued under our warrant indenture. Consequently, if an actual or potential event of default or covenant breach occurs with respect to any of these securities, the trustee may be considered to have a conflicting interest for purposes of the Trust Indenture Act of 1939. In that case, the trustee may be required to resign under one or more of the indentures, and we would be required to appoint a successor trustee. For this purpose, a “potential” event of default or covenant breach means an event that would be an event of default or covenant breach if the requirements for giving us default notice or for the default having to exist for a specific period of time were disregarded.

In addition, affiliates of the trustee have underwritten our securities from time to time in the past and may underwrite our securities from time to time in the future. The trustee may have to resign if a default occurs with respect to the debt securities within one year after any offering of our securities underwritten by an affiliate of the trustee, such as BNY Mellon Capital Markets, LLC, since the trustee would likely be considered to have a conflicting interest for purposes of the Trust Indenture Act of 1939. In that event, except in very limited circumstances, the trustee would be required to resign as trustee under one or more of the indentures and we would be required to appoint a successor trustee, unless the default is cured or waived within 90 days. In addition, the trustee can resign for any reason with 60 days notice, and we would be required to appoint a successor trustee. If the trustee resigns following a default or for any other reason, it may be difficult to identify and appoint a qualified successor trustee. The trustee will remain the trustee under the indenture until a successor is appointed. During the period of time until a successor is appointed, the trustee will have both (a) duties to noteholders under the indenture and (b) a conflicting interest under the indenture for purposes of the Trust Indenture Act.

Under the indentures, we are required to file with the trustee any information, documents and other reports, or summaries thereof, as may be required under the Trust Indenture Act, at the times

[Table of Contents](#)

and in the manner provided under the Trust Indenture Act. However, in case of documents filed with the SEC pursuant to Section 13 or 15(d) of the Exchange Act, any such filing with the trustee need not be made until the 15th day after such filing is actually made with the SEC.

Delivery of such reports, information and documents to the trustee is for informational purposes only and the trustee’s receipt of such does not constitute actual or constructive notice or knowledge of any information contained therein or determinable from information contained therein, including our compliance with any of our covenants under the indentures (as to which the trustee is entitled to rely exclusively on officers’ certificates).

DESCRIPTION OF WARRANTS WE MAY OFFER

Please note that in this section entitled “Description of Warrants We May Offer”, references to The Goldman Sachs Group, Inc., “we”, “our” and “us” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries. Also, in this section, references to “holders” mean those who own warrants registered in their own names, on the books that we or the applicable trustee or warrant agent maintain for this purpose, and not those who own beneficial interests in warrants registered in street name or in warrants issued in book-entry form through one or more depositaries. Owners of beneficial interests in the warrants should read the section below entitled “Legal Ownership and Book-Entry Issuance”.

We May Issue Many Series of Warrants

We may issue warrants that are debt warrants or universal warrants. We may offer warrants separately or together with our debt securities. We may also offer warrants together with other warrants, purchase contracts and debt securities in the form of units, as summarized below in “Description of Units We May Offer”.

We have no restrictions on the number of warrants or number of distinct series of warrants we may issue. We will issue each series of warrants under either a warrant indenture or a warrant agreement. This section summarizes terms to be included in the warrant indenture and warrant agreements and terms of the warrants that apply generally to the warrants. We will describe the specific terms of your warrant in the applicable prospectus supplement. Those terms may vary from the terms described here.

As you read this section, please remember that the specific terms of your warrant as described in your prospectus supplement will supplement and, if applicable, may modify or replace the general terms described in this section. If there are differences between your prospectus supplement and this prospectus, your prospectus supplement will control. Thus, the statements we make in this section may not apply to your warrant.

When we refer to a series of warrants, we mean all warrants issued as part of the same series under the applicable indenture or warrant agreement. When we refer to your prospectus supplement, we mean the prospectus supplement describing the specific terms of the warrant you purchase. The terms used in your prospectus supplement will have the meanings described in this prospectus, unless otherwise specified.

Debt Warrants

We may issue warrants for the purchase of our debt securities on terms to be determined at the time of sale. We refer to this type of warrant as a “debt warrant”.

Universal Warrants

We may also issue warrants, on terms to be determined at the time of sale, for the purchase or sale of, or whose cash value is determined by reference to the performance, level or value of, one or more of the following:

- securities of one or more issuers, including our common stock or preferred stock or other securities described in this prospectus or debt or equity securities of third parties;
- one or more currencies;

Table of Contents

- one or more commodities;
- any other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstance;
- one or more indices; and/or
- one or more baskets of the items described above.

We refer to this type of warrant as a “universal warrant”. We refer to each property described above as a “warrant property”.

We may satisfy our obligations, if any, and the holder of a universal warrant may satisfy its obligations, if any, with respect to any universal warrants by delivering:

- the warrant property;
- the cash value of the warrant property; or
- the cash value of the warrants determined by reference to the performance, level or value of the warrant property.

The applicable prospectus supplement will describe what we may deliver to satisfy our obligations, if any, and what the holder of a universal warrant may deliver to satisfy its obligations, if any, with respect to any universal warrants.

General Terms of Warrants

Your prospectus supplement may contain, where applicable, the following information about your warrants:

- the title and series of, the aggregate number of, and the original issue price of, the warrants;
- the currency with which the warrants may be purchased;
- the indenture or warrant agreement under which we will issue the warrants;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants will be issued in global or non-global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any debt security or purchase contract included in that unit;
- the identities of the trustee or warrant agent, any depositaries and any paying, transfer, calculation or other agents for the warrants;
- any securities exchange or quotation system on which the warrants or any securities deliverable upon exercise of the warrants may be listed;
- whether the warrants are to be sold separately or with other securities, as part of units or otherwise; and
- any other terms of the warrants.

If we issue warrants as part of a unit, the applicable prospectus supplement will specify whether the warrants will be separable from the other securities in the unit before the warrants’ expiration date. A warrant issued in a unit in the United States may not be so separated before the 91st day after the unit is issued.

Table of Contents

No holder of a warrant will have any rights of a holder of the warrant property deliverable under the warrant.

An investment in a warrant may involve special risks, including risks associated with indexed securities and currency-related risks if the warrant or the warrant property is linked to an index or is payable in or otherwise linked to a non-U.S. dollar currency. We describe some of these risks below under “Considerations Relating to Indexed Securities” and “Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency”.

Because we are a holding company, our ability to perform our obligations on the warrants will depend in part on our ability to participate in distributions of assets from our subsidiaries. We discuss these matters above under “Description of Debt Securities We May Offer — We Are a Holding Company”.

Our affiliates may resell warrants in market-making transactions after their initial issuance. We discuss these transactions above under “Description of Debt Securities We May Offer — Information in Your Prospectus Supplement — Market-Making Transactions”.

Additional Terms of Warrants

Debt Warrants

If you purchase debt warrants, your prospectus supplement may contain, where applicable, the following additional information about your warrants:

- the designation, aggregate principal amount, currency and terms of the debt securities that may be purchased upon exercise of the debt warrants;
- the exercise price and whether the exercise price may be paid in cash, by the exchange of any debt warrants or other securities or both and the method of exercising the debt warrants; and
- the designation, terms and amount of debt securities, if any, to be issued together with each of the debt warrants and the date, if any, after which the debt warrants and debt securities will be separately transferable.

Universal Warrants

If you purchase universal warrants, your prospectus supplement may contain, where applicable, the following additional information about your warrants:

- whether the universal warrants are put warrants or call warrants, including in either case warrants that may be settled by means of net cash settlement or cashless exercise, or any other type of warrants;
- the money or warrant property, and the amount or method of determining the amount of money or warrant property, payable or deliverable upon exercise of each universal warrant;
- the price at which and the currency with which the warrant property may be purchased or sold by or on behalf of the holder of each universal warrant upon the exercise of that warrant, or the method of determining that price;
- whether the exercise price may be paid in cash, by the exchange of any universal warrants or other securities or both, and the method of exercising the universal warrants; and
- whether the exercise of the universal warrants is to be settled in cash or by delivery of the warrant property or both and whether settlement will occur on a net basis or a gross basis.

General Provisions of Warrant Indenture

We may issue universal warrants under the warrant indenture. Warrants of this kind will not be secured by any property or assets of The Goldman Sachs Group, Inc. or its subsidiaries. Thus, by owning a warrant issued under the indenture, you hold one of our unsecured obligations.

The warrants issued under the indenture will be contractual obligations of The Goldman Sachs Group, Inc. and will rank equally with all of our other unsecured contractual obligations and unsecured and unsubordinated debt. The indenture does not limit our ability to incur additional contractual obligations or debt.

The indenture is a contract between us and The Bank of New York Mellon, which will initially act as trustee. The trustee has two main roles:

- First, the trustee can enforce your rights against us if we default. There are some limitations on the extent to which the trustee acts on your behalf, which we describe below under “— Default, Remedies and Waiver of Default”.
- Second, the trustee performs administrative duties for us, such as sending you payments and notices.

See “— Our Relationship With the Trustee” below for more information about the trustee.

We May Issue Many Series of Warrants Under the Indenture

We do not have any restrictions on the number of distinct series of warrants that we may issue under the warrant indenture. This section summarizes terms of the warrants that apply generally to all series. The provisions of the indenture allow us not only to issue warrants with terms different from those of warrants previously issued under the indenture, but also to “reopen” a previously issued series of warrants and issue additional warrants of that series.

Amounts That We May Issue

The warrant indenture does not limit the aggregate number of warrants that we may issue or the number of series or the aggregate amount of any particular series. We may issue warrants and other securities at any time without your consent and without notifying you.

The indenture and the warrants do not limit our ability to incur other contractual obligations or indebtedness or to issue other securities. Also, the terms of the warrants do not impose financial or similar restrictions on us except as described below under “— Restriction on Liens”.

Expiration Date and Payment or Settlement Date

The term “expiration date” with respect to any warrant means the date on which the right to exercise the warrant expires. The term “payment or settlement date” with respect to any warrant means the date when any money or warrant property with respect to that warrant becomes payable or deliverable upon exercise or redemption of that warrant in accordance with its terms.

This Section Is Only a Summary

The warrant indenture and its associated documents, including your warrant, contain the full legal text of the matters described in this section and your prospectus supplement. We have filed a copy of the indenture with the SEC as an exhibit to our registration statement. See “Available Information” above for information on how to obtain a copy of it.

Table of Contents

This section and your prospectus supplement summarize all the material terms of the indenture and your warrant. They do not, however, describe every aspect of the indenture and your warrant. For example, in this section and your prospectus supplement, we use terms that have been given special meaning in the indenture, but we describe the meaning for only the more important of those terms.

Governing Law

The warrant indenture and the warrants will be governed by New York law.

Currency of Warrants

Amounts that become due and payable on your warrant may be payable in a currency, composite currency, basket of currencies or currency unit or units specified in your prospectus supplement. We refer to this currency, composite currency, basket of currencies or currency unit or units as a “specified currency”. The specified currency for your warrant will be U.S. dollars, unless your prospectus supplement states otherwise. You will have to pay for your warrant by delivering the requisite amount of the specified currency to GS&Co. or another firm that we name in your prospectus supplement, unless other arrangements have been made between you and us or you and that firm. We will make payments on your warrants in the specified currency, except as described below in “— Payment Mechanics for Warrants”. See “Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency” below for more information about risks of investing in warrants of this kind.

Mergers and Similar Transactions

We are generally permitted to merge or consolidate with another corporation or other entity. We are also permitted to sell our assets substantially as an entirety to another corporation or other entity. With regard to any warrant, however, we may not take any of these actions unless all the following conditions are met:

- If the successor entity in the transaction is not The Goldman Sachs Group, Inc., the successor entity must be organized as a corporation, partnership or trust and must expressly assume our obligations under that warrant and the indenture. The successor entity may be organized under the laws of any jurisdiction, whether in the United States or elsewhere.
- Immediately after the transaction, no default under the warrant has occurred and is continuing. For this purpose, “default under the warrant” means an event of default with respect to that warrant or any event that would be an event of default with respect to that warrant if the requirements for giving us default notice and for our default having to continue for a specific period of time were disregarded. We describe these matters below under “— Default, Remedies and Waiver of Default”.

If the conditions described above are satisfied with respect to any warrant, we will not need to obtain the approval of the holder of that warrant in order to merge or consolidate or to sell our assets. Also, these conditions will apply only if we wish to merge or consolidate with another entity or sell our assets substantially as an entirety to another entity. We will not need to satisfy these conditions if we enter into other types of transactions, including any transaction in which we acquire the stock or assets of another entity, any transaction that involves a change of control of The Goldman Sachs Group, Inc. but in which we do not merge or consolidate and any transaction in which we sell less than substantially all our assets.

Also, if we merge, consolidate or sell our assets substantially as an entirety and the successor is a non-U.S. entity, neither we nor any successor would have any obligation to compensate you for any resulting adverse tax consequences relating to your warrants.

[Table of Contents](#)

Restriction on Liens

In the warrant indenture, we promise, with respect to each series of warrants, not to create or guarantee any debt for borrowed money that is secured by a lien on the voting or profit participating equity ownership interests that we or any of our subsidiaries own in GS&Co., or in any subsidiary that beneficially owns or holds, directly or indirectly, those interests in GS&Co., unless we also secure the warrants of that series on an equal or priority basis with the secured debt. Our promise, however, is subject to an important exception: we may secure debt for borrowed money with liens on those interests without securing the warrants of any series if our board of directors determines that the liens do not materially detract from or interfere with the value or control of those interests as of the date of the determination.

Except as noted above, the indenture does not restrict our ability to put liens on our interests in our subsidiaries other than GS&Co., nor does the indenture restrict our ability to sell or otherwise dispose of our interests in any of our subsidiaries, including GS&Co. In addition, the restriction on liens in the indenture applies only to liens that secure debt for borrowed money. For example, liens imposed by operation of law, such as liens to secure statutory obligations for taxes or workers' compensation benefits, or liens we create to secure obligations to pay legal judgments or surety bonds, would not be covered by this restriction.

Default, Remedies and Waiver of Default

You will have special rights if an event of default with respect to your warrant occurs and is continuing, as described in this subsection.

Events of Default. Unless your prospectus supplement says otherwise, when we refer to an event of default with respect to any warrant, we mean that, upon satisfaction by the holder of the warrant of all conditions precedent to our relevant obligation or covenant to be satisfied by the holder, any of the following occurs:

- We do not pay any money or deliver any warrant property with respect to that warrant on the payment or settlement date in accordance with the terms of that warrant;
- We remain in breach of our covenant described above under “— Restriction on Liens”, or any other covenant we make in the indenture for the benefit of the holder of that warrant for 60 days after we receive a notice of default stating that we are in breach and requiring us to remedy the breach. The notice must be sent by the trustee or the holders of at least 10% in number of the relevant series of warrants;
- We file for bankruptcy or other events of bankruptcy, insolvency or reorganization relating to The Goldman Sachs Group, Inc. occur. Those events must arise under U.S. federal or state law, unless we merge, consolidate or sell our assets as described above and the successor firm is a non-U.S. entity. If that happens, then those events must arise under U.S. federal or state law or the law of the jurisdiction in which the successor firm is legally organized; or
- If the applicable prospectus supplement states that any additional event of default applies to the series, that event of default occurs.

If we do not pay any money or deliver any warrant property when due with respect to a particular warrant of a series, as described in the first bullet point above, that failure to make a payment or delivery will not constitute an event of default with respect to any other warrant of the same series or any other series.

Remedies If an Event of Default Occurs. If an event of default occurs, the trustee will have special duties. In that situation, the trustee will be obligated to use those of its rights and powers under

[Table of Contents](#)

the indenture, and to use the same degree of care and skill in doing so, that a prudent person would use in that situation in conducting his or her own affairs.

Except as described in the prior paragraph, the trustee is not required to take any action under the indenture at the request of any holders unless the holders offer the trustee reasonable protection from expenses and liability. This is called an indemnity. If the trustee is provided with an indemnity reasonably satisfactory to it, the holders of a majority in number of all warrants of the relevant series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee with respect to that series. These majority holders may also direct the trustee in performing any other action under the indenture with respect to the warrants of that series.

Before you bypass the trustee and bring your own lawsuit or other formal legal action or take other steps to enforce your rights or protect your interests relating to any warrant, all of the following must occur:

- The holder of your warrant must give the trustee written notice that an event of default has occurred, and the event of default must not have been cured or waived;
- The holders of not less than 25% in number of all warrants of your series must make a written request that the trustee take action because of the default, and they or other holders must offer to the trustee indemnity reasonably satisfactory to the trustee against the cost and other liabilities of taking that action;
- The trustee must not have taken action for 60 days after the above steps have been taken; and
- During those 60 days, the holders of a majority in number of the warrants of your series must not have given the trustee directions that are inconsistent with the written request of the holders of not less than 25% in number of the warrants of your series.

You are entitled at any time to bring a lawsuit for the payment of any money or delivery of any warrant property due on your warrant on or after its payment or settlement date.

Waiver of Default. The holders of not less than a majority in number of the warrants of any series may waive a default for all warrants of that series. If this happens, the default will be treated as if it has not occurred. No one can waive a default in payment of any money or delivery of any warrant property due on any warrant, however, without the approval of the particular holder of that warrant.

We Will Give the Trustee Information About Defaults Annually. We will furnish to the trustee every year a written statement of two of our officers certifying that to their knowledge we are in compliance with the indenture and the warrants issued under it, or else specifying any default under the indenture.

Book-entry and other indirect owners should consult their banks or brokers for information on how to give notice or direction to or make a request of the trustee. Book-entry and other indirect owners are described below under “Legal Ownership and Book-Entry Issuance”.

Modification of the Warrant Indenture and Waiver of Covenants

There are three types of changes we can make to the warrant indenture and the warrants of any series issued under that indenture.

[Table of Contents](#)

Changes Requiring Each Holder’s Approval. First, there are changes that cannot be made without the approval of each holder of a warrant affected by the change. Here is a list of those types of changes:

- change the exercise price of the warrant;
- change the terms of any warrant with respect to the payment or settlement date of the warrant;
- reduce the amount of money payable or reduce the amount or change the kind of warrant property deliverable upon the exercise of the warrant or any premium payable upon redemption of the warrant;
- change the currency of any payment on a warrant;
- change the place of payment on a warrant;
- permit redemption of a warrant if not previously permitted;
- impair a holder’s right to exercise its warrant, or sue for payment of any money payable or delivery of any warrant property deliverable with respect to its warrant on or after the payment or settlement date or, in the case of redemption, the redemption date;
- if any warrant provides that the holder may require us to repurchase the warrant, impair the holder’s right to require repurchase of the warrant;
- reduce the percentage in number of the warrants of any one or more affected series, taken separately or together, as applicable, the approval of whose holders is needed to change the indenture or those warrants;
- reduce the percentage in number of the warrants of any one or more affected series, taken separately or together, as applicable, the consent of whose holders is needed to waive our compliance with the indenture or to waive defaults; and
- change the provisions of the indenture dealing with modification and waiver in any other respect, except to increase any required percentage referred to above or to add to the provisions that cannot be changed or waived without approval of the holder of each affected warrant.

Changes Not Requiring Approval. The second type of change does not require any approval by holders of the warrants of an affected series. These changes are limited to clarifications and changes that would not adversely affect the warrants of that series in any material respect. Nor do we need any approval to make changes that affect only warrants to be issued under the indenture after the changes take effect.

We may also make changes or obtain waivers that do not adversely affect a particular warrant, even if they affect other warrants. In those cases, we do not need to obtain the approval of the holder of that warrant; we need only obtain any required approvals from the holders of the affected warrants.

Changes Requiring Majority Approval. Any other change to the indenture and the warrants issued under the indenture would require the following approval:

- If the change affects only the warrants of a particular series, it must be approved by the holders of a majority in number of the warrants of that series.
- If the change affects the warrants of more than one series issued under the indenture, it must be approved by the holders of a majority in number of all series affected by the change, with the warrants of all the affected series voting together as one class for this purpose.

[Table of Contents](#)

In each case, the required approval must be given by written consent.

The same majority approval would be required for us to obtain a waiver of any of our covenants in the indenture. Our covenants include the promises we make about merging and putting liens on our interests in GS&Co., which we describe above under “— Mergers and Similar Transactions” and “— Restriction on Liens”. If the holders approve a waiver of a covenant, we will not have to comply with it. The holders, however, cannot approve a waiver of any provision in a particular warrant, or in the indenture as it affects that warrant, that we cannot change without the approval of the holder of that warrant as described above in “— Changes Requiring Each Holder’s Approval”, unless that holder approves the waiver.

Book-entry and other indirect owners should consult their banks or brokers for information on how approval may be granted or denied if we seek to change the warrant indenture or any warrants or request a waiver.

Special Rules for Action by Holders

When holders take any action under the warrant indenture, such as giving a notice of default, approving any change or waiver or giving the trustee an instruction, we will apply the following rules.

Only Outstanding Warrants Are Eligible. Only holders of outstanding warrants of the applicable series will be eligible to participate in any action by holders of warrants of that series. Also, we will count only outstanding warrants in determining whether the various percentage requirements for taking action have been met. For these purposes, a warrant will not be “outstanding” if:

- it has been surrendered for cancellation;
- it has been called for redemption;
- we have deposited or set aside, in trust for its holder, money or warrant property for its payment or settlement; or
- we or one of our affiliates, such as GS&Co., is the owner.

Determining Record Dates for Action by Holders. We will generally be entitled to set any day as a record date for the purpose of determining the holders that are entitled to take action under the indenture. In certain limited circumstances, only the trustee will be entitled to set a record date for action by holders. If we or the trustee set a record date for an approval or other action to be taken by holders, that vote or action may be taken only by persons or entities who are holders on the record date and must be taken during the period that we specify for this purpose, or that the trustee specifies if it sets the record date. We or the trustee, as applicable, may shorten or lengthen this period from time to time. This period, however, may not extend beyond the 180th day after the record date for the action. In addition, record dates for any global warrant may be set in accordance with procedures established by the depositary from time to time. Accordingly, record dates for global warrants may differ from those for other warrants.

Redemption

We will not be entitled to redeem your warrant before its expiration date unless your prospectus supplement specifies a redemption commencement date.

If your prospectus supplement specifies a redemption commencement date, it will also specify one or more redemption prices. It may also specify one or more redemption periods during which the redemption prices relating to a redemption of warrants during those periods will apply.

Table of Contents

If your prospectus supplement specifies a redemption commencement date, your warrant will be redeemable at our option at any time on or after that date or at a specified time or times. If we redeem your warrant, we will do so at the specified redemption price. If different prices are specified for different redemption periods, the price we pay will be the price that applies to the redemption period during which your warrant is redeemed.

If we exercise an option to redeem any warrant, we will give to the holder written notice of the redemption price of the warrant to be redeemed, not less than 30 days nor more than 60 days before the applicable redemption date or within any other period before the applicable redemption date specified in the applicable prospectus supplement. We will give the notice in the manner described below in “— Notices”.

We or our affiliates may purchase warrants from investors who are willing to sell from time to time, either in the open market at prevailing prices or in private transactions at negotiated prices. Warrants that we or they purchase may, at our discretion, be held, resold or canceled.

Form, Exchange and Transfer of Warrants

We will issue each warrant in global — *i.e.*, book-entry — form only, unless we say otherwise in the applicable prospectus supplement. Warrants in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the warrants represented by the global security. Those who own beneficial interests in a global warrant will do so through participants in the depositary’s system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We describe book-entry securities below under “Legal Ownership and Book-Entry Issuance”.

If a warrant is issued as a registered global warrant, only the depositary — *e.g.*, DTC, Euroclear and Clearstream — will be entitled to transfer and exchange the warrant as described in this subsection, since the depositary will be the sole holder of the warrant.

If any warrants cease to be issued in registered global form, they will be issued:

- only in fully registered form; and
- only in the denominations specified in your prospectus supplement.

Holders may exchange their warrants for warrants of smaller denominations or combined into fewer warrants of larger denominations, as long as the total number of warrants is not changed.

Holders may exchange or transfer their warrants at the office of the trustee. They may also replace lost, stolen, destroyed or mutilated warrants at that office. We have appointed the trustee to act as our agent for registering warrants in the names of holders and transferring and replacing warrants. We may, without your approval, appoint another entity to perform these functions or perform them ourselves.

Holders will not be required to pay a service charge to transfer or exchange their warrants, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder’s proof of legal ownership. The transfer agent may require an indemnity before replacing any warrants.

If we have the right to redeem, accelerate or settle any warrants before their expiration, and we exercise our right as to less than all those warrants, we may block the transfer or exchange of those

[Table of Contents](#)

warrants during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing or during any other period specified in the applicable prospectus supplement, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any warrant selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any warrant being partially settled.

If we have designated additional transfer agents for your warrant, they will be named in your prospectus supplement. We may, without your approval, appoint additional transfer agents or cancel the appointment of any particular transfer agent. We may also approve a change in the office through which any transfer agent acts.

The rules for exchange described above apply to exchange of warrants for other warrants of the same series and kind. If a warrant is exercisable for a different kind of security, such as one that we have not issued, or for other property, the rules governing that type of exercise will be described in the applicable prospectus supplement.

Payment Mechanics for Warrants

Who Receives Payment? If money is due on a warrant at its payment or settlement date, we will pay the amount to the holder of the warrant against surrender of the warrant at a proper place of payment or, in the case of a global warrant, in accordance with the applicable policies of the depositary, Euroclear and Clearstream, as applicable.

How We Will Make Payments Due in U.S. Dollars. We will follow the practice described in this subsection when paying amounts due in U.S. dollars. Payments of amounts due in other currencies will be made as described in the next subsection.

- **Payments on Global Warrants.** We will make payments on a global warrant in accordance with the applicable policies of the depositary as in effect from time to time. Under those policies, we will pay directly to the depositary, or its nominee, and not to any indirect owners who own beneficial interests in the global warrant. An indirect owner’s right to receive those payments will be governed by the rules and practices of the depositary and its participants, as described in the section entitled “Legal Ownership and Book-Entry Issuance — What Is a Global Security?”.
- **Payments on Non-Global Warrants.** We will make payments on a warrant in non-global, registered form as follows. We will make all payments by check at the paying agent described below, against surrender of the warrant. All payments by check will be made in next-day funds — *i.e.*, funds that become available on the day after the check is cashed.

Alternatively, if a non-global warrant has an original issue price of at least \$1,000,000 (or the equivalent in another currency) and the holder asks us to do so, we will pay any amount that becomes due on the warrant by wire transfer of immediately available funds to an account at a bank in New York City, on the payment or settlement date. To request wire payment, the holder must give the paying agent appropriate wire transfer instructions at least five business days before the requested wire payment is due. Payment will be made only after the warrant is surrendered to the paying agent.

Book-entry and other indirect owners should consult their banks or brokers for information on how they will receive payments on their warrants.

How We Will Make Payments Due in Other Currencies. We will follow the practice described in this subsection when paying amounts that are due in a specified currency other than U.S. dollars.

[Table of Contents](#)

Payments on Global Warrants. We will make payments on a global warrant in the applicable specified currency in accordance with the applicable policies as in effect from time to time of the depositary, which may be DTC, Euroclear or Clearstream. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depositary for all warrants in global form.

Indirect owners of a global warrant denominated in a currency other than U.S. dollars should consult their banks or brokers for information on how to request payment in the specified currency in cases where holders have a right to do so.

Payments on Non-Global Warrants. Except as described in the last paragraph under this heading, we will make payments on warrants in non-global form in the applicable specified currency. We will make these payments by wire transfer of immediately available funds to any account that is maintained in the applicable specified currency at a bank designated by the holder and is acceptable to us and the trustee. To designate an account for wire payment, the holder must give the paying agent appropriate wire instructions at least five business days before the requested wire payment is due. The payment will be made only after the warrant is surrendered to the paying agent.

If a holder fails to give instructions as described above, we will notify the holder at the address in the trustee's records and will make the payment within five business days after the holder provides appropriate instructions. Any late payment made in these circumstances will be treated under the indenture as if made on the payment or settlement date, and no interest will accrue on the late payment from the payment or settlement date to the date paid.

Although a payment on a warrant in non-global form may be due in a specified currency other than U.S. dollars, we will make the payment in U.S. dollars if your prospectus supplement specifies that holders may ask us to do so and you make such a request. To request U.S. dollar payment in these circumstances, the holder must provide appropriate written notice to the trustee at least five business days before the payment or settlement date for which payment in U.S. dollars is requested.

Book-entry and other indirect owners of a warrant with a specified currency other than U.S. dollars should contact their banks or brokers for information about how to receive payments in the specified currency or in U.S. dollars.

Conversion to U.S. Dollars. Unless otherwise indicated in your prospectus supplement, holders are not entitled to receive payments in U.S. dollars of an amount due in another currency, either on a global warrant or a non-global warrant.

If your prospectus supplement specifies that holders may request that we make payments in U.S. dollars of an amount due in another currency, the exchange rate agent described below will calculate the U.S. dollar amount the holder receives in the exchange rate agent's discretion. A holder that requests payment in U.S. dollars will bear all associated currency exchange costs, which will be deducted from the payment.

When the Specified Currency Is Not Available. If we are obligated to make any payment in a specified currency other than U.S. dollars, and the specified currency or any successor currency is not available to us due to circumstances beyond our control — such as the imposition of exchange controls or a disruption in the currency markets — we will be entitled to satisfy our obligation to make the payment in that specified currency by making the payment in U.S. dollars, on the basis of the exchange rate determined by the exchange rate agent described below, in its discretion.

Table of Contents

The foregoing will apply to any warrant, whether in global or non-global form, and to any payment, including a payment at the payment or settlement date. Any payment made under the circumstances and in a manner described above will not result in a default under any warrant or the indenture.

Exchange Rate Agent. If we issue a warrant in a specified currency other than U.S. dollars, we will appoint a financial institution to act as the exchange rate agent and will name the institution initially appointed when the warrant is originally issued in the applicable prospectus supplement. We may select GS&Co. or another of our affiliates to perform this role. We may change the exchange rate agent from time to time after the original issue date of the warrant without your consent and without notifying you of the change.

All determinations made by the exchange rate agent will be in its sole discretion unless we state in the applicable prospectus supplement that any determination requires our approval. In the absence of manifest error, those determinations will be conclusive for all purposes and binding on you and us, without any liability on the part of the exchange rate agent.

Payment When Offices Are Closed. Unless otherwise specified in the applicable prospectus supplement, if any payment or delivery of warrant property is due on a warrant on a day that is not a business day, we will make the payment or delivery on the next day that is a business day. Payments or deliveries postponed to the next business day in this situation will be treated under the indenture as if they were made on the original payment or settlement date. Postponement of this kind will not result in a default under any warrant or the indenture, and, unless otherwise specified in the applicable prospectus supplement, no interest will accrue on the postponed amount from the original payment or settlement date to the next day that is a business day.

The term “business day” means, for any warrant, a day that meets all the following applicable requirements:

- for all warrants, is a Monday, Tuesday, Wednesday, Thursday or Friday that is not a day on which banking institutions in New York City are authorized or obligated by law or executive order to close and that satisfies any other criteria specified in your prospectus supplement; and
- if the warrant has a specified currency other than U.S. dollars or euros, is also a day on which banking institutions are not authorized or obligated by law, regulation or executive order to close in the principal financial center of the country issuing the specified currency.

Paying Agent. We may appoint one or more financial institutions to act as our paying agents, at whose designated offices warrants in non-global form may be surrendered for payment at their payment or settlement date. We call each of those offices a paying agent. We may add, replace or terminate paying agents from time to time. We may also choose to act as our own paying agent. Initially, we have appointed the trustee, at its corporate trust office in New York City, as the paying agent. We must notify the trustee of changes in the paying agents.

Unclaimed Payments. Regardless of who acts as paying agent, all money paid or warrant property delivered by us to a paying agent that remains unclaimed at the end of two years after the amount is due to a holder will be repaid or redelivered to us. After that two-year period, the holder may look only to us for payment of any money or delivery of any warrant property, and not to the trustee, any other paying agent or anyone else.

Notices

Notices to be given to holders of a global warrant will be given only to the depository, in accordance with its applicable policies as in effect from time to time. Notices to be given to holders of

Table of Contents

warrants not in global form will be sent by mail to the respective addresses of the holders as they appear in the trustee’s records, and will be deemed given when mailed. Neither the failure to give any notice to a particular holder, nor any defect in a notice given to a particular holder, will affect the sufficiency of any notice given to another holder.

Book-entry and other indirect owners should consult their banks or brokers for information on how they will receive notices.

Our Relationship With the Trustee

The Bank of New York Mellon has provided commercial banking and other services for us and our affiliates in the past and may do so in the future. Among other things, The Bank of New York Mellon provides us with a line of credit, holds debt securities issued by us and serves as trustee or agent with regard to other warrants and debt obligations of The Goldman Sachs Group, Inc. or its subsidiaries.

The Bank of New York Mellon is initially serving as the trustee for the warrants issued under the warrant indenture and for the senior debt securities and subordinated debt securities. Consequently, if an actual or potential event of default occurs with respect to any of these securities, the trustee may be considered to have a conflicting interest for purposes of the Trust Indenture Act of 1939. In that case, the trustee may be required to resign under one or more of the indentures, and we would be required to appoint a successor trustee. For this purpose, a “potential” event of default means an event that would be an event of default if the requirements for giving us default notice or for the default having to exist for a specific period of time were disregarded.

In addition, affiliates of the trustee may underwrite our warrants from time to time in the future. The trustee may have to resign if a default occurs with respect to the warrants within one year after any offering of our warrants underwritten by an affiliate of the trustee, such as BNY Mellon Capital Markets, LLC, since the trustee would likely be considered to have a conflicting interest for purposes of the Trust Indenture Act of 1939. In that event, except in very limited circumstances, the trustee would be required to resign as trustee under one or more of the indentures and we would be required to appoint a successor trustee, unless the default is cured or waived within 90 days. In addition, the trustee can resign for any reason with 60 days’ notice, and we would be required to appoint a successor trustee. If the trustee resigns following a default or for any other reason, it may be difficult to identify and appoint a qualified successor trustee. The trustee will remain the trustee under the indenture until a successor is appointed. During the period of time until a successor is appointed, the trustee will have both (a) duties to noteholders under the indenture and (b) a conflicting interest under the indenture for purposes of the Trust Indenture Act.

General Provisions of Warrant Agreements

We may issue debt warrants and some universal warrants in one or more series under one or more warrant agreements, each to be entered into between us and a bank, trust company or other financial institution as warrant agent. We may add, replace or terminate warrant agents from time to time. We may also choose to act as our own warrant agent. We will describe the warrant agreement under which we issue any warrants in the applicable prospectus supplement, and we will file that agreement with the SEC, either as an exhibit to an amendment to the registration statement of which this prospectus is a part or as an exhibit to a current report on Form 8-K. See “Available Information” above for information on how to obtain a copy of a warrant agreement when it is filed.

We may also issue universal warrants under the warrant indenture. For these warrants, the applicable provisions of the warrant indenture described above would apply instead of the provisions described in this section.

Enforcement of Rights

The warrant agent under a warrant agreement will act solely as our agent in connection with the warrants issued under that agreement. The warrant agent will not assume any obligation or relationship of agency or trust for or with any holders of those warrants. Any holder of warrants may, without the consent of any other person, enforce by appropriate legal action, on its own behalf, its right to exercise those warrants in accordance with their terms. No holder of any warrant will be entitled to any rights of a holder of the debt securities or warrant property purchasable upon exercise of the warrant, including any right to receive payments on those debt securities or warrant property or to enforce any covenants or rights in the relevant indenture or any other agreement.

Modifications Without Consent of Holders

We and the applicable warrant agent may amend any warrant or warrant agreement without the consent of any holder:

- to cure any ambiguity;
- to cure, correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only warrants to be issued after the changes take effect. We may also make changes that do not adversely affect a particular warrant in any material respect, even if they adversely affect other warrants in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected warrant; we need only obtain any required approvals from the holders of the affected warrants.

Modifications with Consent of Holders

We may not amend any particular warrant or a warrant agreement with respect to any particular warrant unless we obtain the consent of the holder of that warrant, if the amendment would:

- change the exercise price of the warrant;
- change the kind or reduce the amount of the warrant property or other consideration receivable upon exercise, cancellation or expiration of the warrant;
- shorten, advance or defer the period of time during which the holder may exercise the warrant or otherwise impair the holder’s right to exercise the warrant; or
- reduce the percentage of outstanding, unexpired warrants of any series or class the consent of whose holders is required to amend the series or class, or the applicable warrant agreement with regard to that series or class, as described below.

Any other change to a particular warrant agreement and the warrants issued under that agreement would require the following approval:

- If the change affects only the warrants of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding, unexpired warrants of that series.
- If the change affects the warrants of more than one series issued under that agreement, the change must be approved by the holders of a majority of all outstanding, unexpired warrants

[Table of Contents](#)

of all series affected by the change, with the warrants of all the affected series voting together as one class for this purpose.

In each case, the required approval must be given in writing.

Warrant Agreement Will Not Be Qualified Under Trust Indenture Act

No warrant agreement will be qualified as an indenture, and no warrant agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of warrants issued under a warrant agreement will not have the protection of the Trust Indenture Act with respect to their warrants.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

The warrant agreements and any warrants issued under the warrant agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the warrants and warrant agreements. We will then be relieved of any further obligation under the warrants and warrant agreements.

The warrant agreements and any warrants issued under the warrant agreements will not include any restrictions on our ability to put liens on our assets, including our interests in our subsidiaries, nor will they restrict our ability to sell our assets. The warrant agreements and any warrants issued under the warrant agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

Governing Law

Each warrant agreement and any warrants issued under the warrant agreements will be governed by New York law.

Form, Exchange and Transfer

We will issue each warrant in global — *i.e.*, book-entry — form only, unless we specify otherwise in the applicable prospectus supplement. Warrants in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the warrants represented by the global security. Those who own beneficial interests in a global warrant will do so through participants in the depositary’s system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We describe book-entry securities below under “Legal Ownership and Book-Entry Issuance”.

In addition, we will issue each warrant in registered form.

If any warrants are issued in non-global form, the following will apply to them:

The warrants will be issued in fully registered form in denominations stated in the applicable prospectus supplement. Holders may exchange their warrants for warrants of smaller denominations or combined into fewer warrants of larger denominations, as long as the total number of warrants is not changed.

Holders may exchange or transfer their warrants at the office of the warrant agent. They may also replace lost, stolen, destroyed or mutilated warrants at that office. We may appoint another entity to perform these functions or perform them ourselves.

Table of Contents

Holders will not be required to pay a service charge to transfer or exchange their warrants, but they may be required to pay any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder’s proof of legal ownership. The transfer agent may also require an indemnity before replacing any warrants.

If we have the right to redeem, accelerate or settle any warrants before their expiration, and we exercise our right as to less than all those warrants, we may block the transfer or exchange of those warrants during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any warrant selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any warrant being partially settled.

Only the depository will be entitled to transfer or exchange a warrant in global form, since it will be the sole holder of the warrant.

Payments and Notices

In making payments and giving notices with respect to our warrants issued under warrant agreements, we will follow the procedures we plan to use with respect to our warrants issued under the warrant indenture, where applicable. We describe these procedures above under “— General Provisions of Warrant Indenture — Payment Mechanics for Warrants” and “— Notices”.

Calculation Agent

Calculations relating to warrants will be made by the calculation agent, an institution that we appoint as our agent for this purpose. That institution may include any affiliate of ours, such as GS&Co. The prospectus supplement for a particular warrant will name the institution that we have appointed to act as the calculation agent for that warrant as of its original issue date. We may appoint a different institution to serve as calculation agent from time to time after the original issue date of the warrant without your consent and without notifying you of the change.

The calculation agent’s determination of any amount of money payable or warrant property deliverable with respect to a warrant will be final and binding in the absence of manifest error.

All percentages resulting from any calculation relating to a warrant will be rounded upward or downward, as appropriate, to the next higher or lower one hundred-thousandth of a percentage point, e.g., 9.876541% (or .09876541) being rounded down to 9.87654% (or .0987654) and 9.876545% (or .09876545) being rounded up to 9.87655% (or .0987655). All amounts used in or resulting from any calculation relating to a warrant will be rounded upward or downward, as appropriate, to the nearest cent, in the case of U.S. dollars, or to the nearest corresponding hundredth of a unit, in the case of a currency other than U.S. dollars, with one-half cent or one-half of a corresponding hundredth of a unit or more being rounded upward.

DESCRIPTION OF PURCHASE CONTRACTS WE MAY OFFER

Please note that in this section entitled “Description of Purchase Contracts We May Offer”, references to “The Goldman Sachs Group, Inc.”, “we”, “our” and “us” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries. Also, in this section, references to “holders” mean those who own purchase contracts registered in their own names, on the books that we or our agent maintain for this purpose, and not those who own beneficial interests in purchase contracts registered in street name or in purchase contracts issued in book-entry form through one or more depositories. Owners of beneficial interests in the purchase contracts should read the section below entitled “Legal Ownership and Book-Entry Issuance”.

Purchase Contract Property

We may issue purchase contracts for the purchase or sale of, or whose cash value is determined by reference or linked to the performance, level or value of, one or more of the following:

- securities of one or more issuers, including our common or preferred stock or other securities described in this prospectus or debt or equity securities of third parties;
- one or more currencies;
- one or more commodities;
- any other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstance;
- one or more indices; and/or
- one or more baskets of the items described above.

We refer to each property described above as a “purchase contract property”. Each purchase contract will obligate:

- the holder to purchase or sell, and obligate us to sell or purchase, on specified dates, one or more purchase contract properties at a specified price or prices; or
- the holder or us to settle the purchase contract by reference to the value, performance or level of one or more purchase contract properties, on specified dates and at a specified price or prices.

Some purchase contracts may include multiple obligations to purchase or sell different purchase contract properties, and both we and the holder may be sellers or buyers under the same purchase contract. No holder of a purchase contract will have any rights of a holder of the purchase contract property purchasable under the contract, including any right to receive payments on that property.

An investment in purchase contracts may involve special risks, including risks associated with indexed securities and currency-related risks if the purchase contract or purchase contract property is linked to an index or is payable in or otherwise linked to a non-U.S. dollar currency. We describe some of these risks below under “Considerations Relating to Indexed Securities” and “Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency”.

Because we are a holding company, our ability to perform our obligations on the purchase contracts will depend in part on our ability to participate in distributions of assets from our subsidiaries. We discuss these matters above under “Description of Debt Securities We May Offer — We Are a Holding Company”.

Table of Contents

Our affiliates may resell purchase contracts after their initial issuance in market-making transactions. We describe these transactions above under “Description of Debt Securities We May Offer — Information in Your Prospectus Supplement — Market-Making Transactions”.

We May Issue Many Series of Purchase Contracts

We have no restrictions on the number of purchase contracts or number of distinct series of purchase contracts we may issue. We may also “reopen” a previously issued series of purchase contracts and issue additional purchase contracts of that series. In addition, we may issue a purchase contract separately or as part of a unit, as described below under “Description of Units We May Offer”.

This section summarizes terms of the purchase contracts that apply generally to all purchase contracts. We describe the specific terms of your purchase contract in the prospectus supplement accompanying this prospectus. Those terms may vary from the terms described here.

As you read this section, please remember that the specific terms of your purchase contract as described in your prospectus supplement will supplement and, if applicable, may modify or replace the general terms described in this section. If there are differences between your prospectus supplement and this prospectus, your prospectus supplement will control. Thus, the statements we make in this section may not apply to your purchase contract.

When we refer to a series of purchase contracts, we mean all the purchase contracts issued as part of the same series under the applicable governing instrument. When we refer to your prospectus supplement, we mean the prospectus supplement describing the specific terms of the purchase contract you purchase. The terms used in your prospectus supplement will have the meanings described in this prospectus, unless otherwise specified.

Prepaid Purchase Contracts; Applicability of Debt Indentures

Some purchase contracts may require the holders to satisfy their obligations under the contracts at the time the contracts are issued. We refer to those contracts as “prepaid purchase contracts”. Our obligation to settle a prepaid purchase contract on the relevant settlement date will be one of our senior debt securities or subordinated debt securities, which are described above under “Description of Debt Securities We May Offer”. Prepaid purchase contracts will be issued under the applicable debt indenture, and the provisions of that debt indenture will govern those contracts.

Non-Prepaid Purchase Contracts; No Trust Indenture Act Protection

Some purchase contracts do not require the holders to satisfy their obligations under the contracts until settlement. We refer to those contracts as “non-prepaid purchase contracts”. The holder of a non-prepaid purchase contract may remain obligated to perform under the contract for a substantial period of time.

Non-prepaid purchase contracts will be issued under a unit agreement, if they are issued in units, or under some other document, if they are not. We describe unit agreements generally under “Description of Units We May Offer” below. We will describe the particular governing document that applies to your non-prepaid purchase contracts in the applicable prospectus supplement.

Non-prepaid purchase contracts will not be senior debt securities or subordinated debt securities and will not be issued under one of our indentures. Consequently, no governing documents for non-prepaid purchase contracts will be qualified as indentures, and no third party will be required to

Table of Contents

qualify as a trustee with regard to those contracts, under the Trust Indenture Act. Holders of non-prepaid purchase contracts will not have the protection of the Trust Indenture Act with respect to those contracts.

General Terms of Purchase Contracts

Your prospectus supplement may contain, where applicable, the following information about your purchase contract:

- whether the purchase contract obligates the holder to purchase or sell, or both purchase and sell, one or more purchase contract properties and the nature and amount of each of those properties, or the method of determining those amounts;
- whether the purchase contract is to be prepaid or not and the governing document for the contract;
- whether the purchase contract is to be settled by delivery, or by reference or linkage to the value, performance or level of, the purchase contract properties;
- any acceleration, cancellation, termination or other provisions relating to the settlement of the purchase contract;
- whether the purchase contract will be issued as part of a unit and, if so, the other securities comprising the unit and whether any unit securities will be subject to a security interest in our favor as described below; and
- whether the purchase contract will be issued in global or non-global form.

If we issue a purchase contract as part of a unit, the accompanying prospectus supplement will state whether the contract will be separable from the other securities in the unit before the contract settlement date. A purchase contract issued in a unit in the United States may not be so separated before the 91st day after the unit is issued.

Additional Terms of Non-Prepaid Purchase Contracts

In addition to the general terms described above, a non-prepaid purchase contract may include the following additional terms.

Pledge by Holders to Secure Performance

If we say so in the applicable prospectus supplement, the holder’s obligations under the purchase contract and governing document will be secured by collateral. In that case, the holder, acting through the unit agent as its attorney-in-fact, if applicable, will pledge the items described below to a collateral agent named in the prospectus supplement, which will hold them, for our benefit, as collateral to secure the holder’s obligations. We refer to this as the “pledge” and all the items described below as the “pledged items”. The pledge will create a security interest in the holder’s entire interest in and to:

- any other securities included in the unit, if the purchase contract is part of a unit, and/or any other property specified in the applicable prospectus supplement;
- all additions to and substitutions for the pledged items;
- all income, proceeds and collections received in respect of the pledged items; and
- all powers and rights owned or acquired later with respect to the pledged items.

Table of Contents

The collateral agent will forward all payments and proceeds from the pledged items to us, unless the payments and proceeds have been released from the pledge in accordance with the purchase contract and the governing document. We will use the payments and proceeds from the pledged items to satisfy the holder’s obligations under the purchase contract.

Settlement of Purchase Contracts That Are Part of Units

The following will apply to a non-prepaid purchase contract that is issued together with any of our debt securities as part of a unit. If the holder fails to satisfy its obligations under the purchase contract, the unit agent may apply the principal payments on the debt securities to satisfy those obligations as provided in the governing document. If the holder is permitted to settle its obligations by cash payment, the holder may be permitted to do so by delivering the debt securities in the unit to the unit agent as provided in the governing document.

Book-entry and other indirect owners should consult their banks or brokers for information on how to settle their purchase contracts.

Failure of Holder to Perform Obligations

If the holder fails to settle its obligations under a non-prepaid purchase contract as required, the holder will not receive the purchase contract property or other consideration to be delivered at settlement. Holders that fail to make timely settlement may also be obligated to pay interest or other amounts.

Assumption of Obligations by Transferee

When the holder of a non-prepaid purchase contract transfers the purchase contract to a new holder, the new holder will assume the obligations of the prior holder with respect to the purchase contract, and the prior holder will be released from those obligations. Under the non-prepaid purchase contract, we will consent to the transfer of the purchase contract, to the assumption of those obligations by the new holder and to the release of the prior holder, if the transfer is made in accordance with the provisions of the purchase contract.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

Purchase contracts that are not prepaid will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under these purchase contracts. We will then be relieved of any further obligation under these purchase contracts.

Purchase contracts that are not prepaid will not include any restrictions on our ability to put liens on our assets, including our interests in our subsidiaries, nor will they restrict our ability to sell our assets. These purchase contracts also will not provide for any events of default (or covenant breaches) or remedies upon the occurrence of any events of default (or covenant breaches).

Governing Law

The purchase contracts and any governing documents will be governed by New York law.

Form, Exchange and Transfer

We will issue each purchase contract in global — *i.e.*, book-entry — form only, unless we specify otherwise in the applicable prospectus supplement. Purchase contracts in book-entry form will be represented by a global security registered in the name of a depository, which will be the holder of all the purchase contracts represented by the global security. Those who own beneficial interests in a purchase contract will do so through participants in the depository’s clearing system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depository and its participants. We describe book-entry securities below under “Legal Ownership and Book-Entry Issuance”.

In addition, we will issue each purchase contract in registered form.

If any purchase contracts are issued in non-global form, the following will apply to them:

- The purchase contracts will be issued in fully registered form in denominations stated in the applicable prospectus supplement. Holders may exchange their purchase contracts for contracts of smaller denominations or combined into fewer contracts of larger denominations, as long as the total amount is not changed.
- Holders may exchange or transfer their purchase contracts at the office of the trustee, unit agent or other agent we name in the applicable prospectus supplement. Holders may also replace lost, stolen, destroyed or mutilated purchase contracts at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their purchase contracts, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder’s proof of legal ownership. The transfer agent may also require an indemnity before replacing any purchase contracts.
- If we have the right to redeem, accelerate or settle any purchase contracts before their maturity, and we exercise our right as to less than all those purchase contracts, we may block the transfer or exchange of those purchase contracts during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any purchase contract selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any purchase contract being partially settled.

Only the depository will be entitled to transfer or exchange a purchase contract in global form, since it will be the sole holder of the purchase contract.

Payments and Notices

In making payments and giving notices with respect to purchase contracts, we will follow the procedures we plan to use with respect to our debt securities, when applicable. We describe these procedures above under “Description of Debt Securities We May Offer — Payment Mechanics for Debt Securities” and “Description of Debt Securities We May Offer — Notices”.

DESCRIPTION OF UNITS WE MAY OFFER

Please note that in this section entitled “Description of Units We May Offer”, references to “The Goldman Sachs Group, Inc.”, “we”, “our” and “us” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries. Also, in this section, references to “holders” mean those who own units registered in their own names, on the books that we or our agent maintain for this purpose, and not those who own beneficial interests in units registered in street name or in units issued in book-entry form through one or more depositaries. Owners of beneficial interests in the units should read the section below entitled “Legal Ownership and Book-Entry Issuance”.

We may issue units comprised of one or more debt securities, warrants, purchase contracts, shares of preferred stock, depositary shares and common stock, as well as debt or equity securities of third parties, in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Debt Securities We May Offer”, “Description of Warrants We May Offer”, “Description of Purchase Contracts We May Offer” and “Description of Preferred Stock We May Offer”, will apply to the securities included in each unit, to the extent relevant.

An investment in units may involve special risks, including risks associated with indexed securities and currency-related risks if the securities comprising the units are linked to an index or are payable in or otherwise linked to a non-U.S. dollar currency. We describe some of these risks below under “Considerations Relating to Indexed Securities” and “Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency”.

Our affiliates may resell units after their initial issuance in market-making transactions. We discuss these transactions above under “Description of Debt Securities We May Offer — Information in Your Prospectus Supplement — Market-Making Transactions”.

We May Issue Many Series of Units

We may issue units in such amounts and in as many distinct series as we wish. We may also “reopen” a previously issued series of units and issue additional units of that series. This section summarizes terms of the units that apply generally to all series. We describe most of the financial and other specific terms of your series in the applicable prospectus supplement accompanying this prospectus. Those terms may vary from the terms described here.

Table of Contents

As you read this section, please remember that the specific terms of your unit as described in your prospectus supplement will supplement and, if applicable, may modify or replace the general terms described in this section. If there are differences between your prospectus supplement and this prospectus, your prospectus supplement will control. Thus, the statements we make in this section may not apply to your unit.

When we refer to a series of units, we mean all units issued as part of the same series under the applicable unit agreement. We will identify the series of which your units are a part in your prospectus supplement. When we refer to your prospectus supplement, we mean the prospectus supplement describing the specific terms of the units you purchase. The terms used in your prospectus supplement will have the meanings described in this prospectus, unless otherwise specified.

Unit Agreements: Prepaid, Non-Prepaid and Other

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We may also choose to act as our own unit agent, and we may select GS&Co. or another of our affiliates to perform this role. We will identify the unit agreement under which your units will be issued and the unit agent under that agreement in your prospectus supplement.

If a unit includes one or more purchase contracts and all those purchase contracts are prepaid purchase contracts, we will issue the unit under a “prepaid unit agreement”. Prepaid unit agreements will reflect the fact that the holders of the related units have no further obligations under the purchase contracts included in their units. If a unit includes one or more non-prepaid purchase contracts, we will issue the unit under a “non-prepaid unit agreement”. Non-prepaid unit agreements will reflect the fact that the holders have payment or other obligations under one or more of the purchase contracts comprising their units. We may also issue units under other kinds of unit agreements, which we will describe in the applicable prospectus supplement. In some cases, we may issue units under one of our indentures.

A unit agreement may also serve as the governing document for a security included in a unit. For example, a non-prepaid purchase contract that is part of a unit may be issued under and governed by the relevant unit agreement.

In this prospectus, we refer to prepaid unit agreements, non-prepaid unit agreements and other unit agreements, generally, as “unit agreements”. We will file the unit agreement under which we issue your units with the SEC, either as an exhibit to an amendment to the registration statement of which this prospectus is a part or as an exhibit to a current report on Form 8-K. See “Available Information” above for information on how to obtain a copy of a unit agreement when it is filed.

General Provisions of a Unit Agreement

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement.

Enforcement of Rights

The unit agent under a unit agreement will act solely as our agent in connection with the units issued under that agreement. The unit agent will not assume any obligation or relationship of agency or trust for or with any holders of those units or of the securities comprising those units. The unit agent will not be obligated to take any action on behalf of those holders to enforce or protect their rights under the units or the included securities.

Table of Contents

Except as described in the next paragraph, a holder of a unit may, without the consent of the unit agent or any other holder, enforce its rights as holder under any security included in the unit, in accordance with the terms of that security and the indenture, warrant agreement, unit agreement or trust agreement under which that security is issued. Those terms are described elsewhere in this prospectus under the sections relating to debt securities, warrants and purchase contracts.

Notwithstanding the foregoing, a unit agreement may limit or otherwise affect the ability of a holder of units issued under that agreement to enforce its rights, including any right to bring a legal action, with respect to those units or any securities, other than debt securities, prepaid purchase contracts and warrants issued under the warrant indenture, that are included in those units. Limitations of this kind will be described in the applicable prospectus supplement.

Modification Without Consent of Holders

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity;
- to correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

The foregoing applies also to any security issued under a unit agreement, as the governing document.

Modification With Consent of Holders

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right;
- impair the right of the holder to purchase or sell, as the case may be, the purchase contract property under any non-prepaid purchase contract issued under the unit agreement, or to require delivery of or payment for that property when due; or
- reduce the percentage of outstanding units of any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series.

Table of Contents

- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

Unit Agreements Will Not Be Qualified Under Trust Indenture Act

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

Additional Provisions of a Non-Prepaid Unit Agreement

In addition to the provisions described above, a non-prepaid unit agreement will include the following provisions.

Obligations of Unit Holder

Each holder of units issued under a non-prepaid unit agreement will:

- be bound by the terms of each non-prepaid purchase contract included in the holder’s units and by the terms of the unit agreement with respect to those contracts; and
- appoint the unit agent as its authorized agent to execute, deliver and perform on the holder’s behalf each non-prepaid purchase contract included in the holder’s units.

The unit agreement for a unit that includes a non-prepaid purchase contract will also include provisions regarding the holder’s pledge of collateral and special settlement provisions. These are described above under “Description of Purchase Contracts We May Offer — Additional Terms of Non-Prepaid Purchase Contracts”.

Failure of Holder to Perform Obligations

If the holder fails to settle its obligations under a non-prepaid purchase contract included in a unit as required, the holder will not receive the purchase contract property or other consideration to be delivered at settlement of the purchase contract. Holders that fail to make timely settlement may also be obligated to pay interest or other amounts.

Assumption of Obligations by Transferee

When the holder of a unit issued under a non-prepaid unit agreement transfers the unit to a new holder, the new holder will assume the obligations of the prior holder with respect to each non-prepaid purchase contract included in the unit, and the prior holder will be released from those obligations. Under the non-prepaid unit agreement, we will consent to the transfer of the unit, to the assumption of those obligations by the new holder and to the release of the prior holder, if the transfer is made in accordance with the provisions of that agreement.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or

[Table of Contents](#)

consolidate with, or sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, including our interests in our subsidiaries, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default (or covenant breaches) or remedies upon the occurrence of any events of default (or covenant breaches).

Governing Law

The unit agreements and the units will be governed by New York law.

Form, Exchange and Transfer

We will issue each unit in global — *i.e.*, book-entry — form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary’s system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We describe book-entry securities below under “Legal Ownership and Book-Entry Issuance”.

In addition, we will issue each unit in registered form.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder’s proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depositary will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

Payments and Notices

In making payments and giving notices with respect to our units, we will follow the procedures we plan to use with respect to our debt securities, where applicable. We describe those procedures above under “Description of Debt Securities We May Offer — Payment Mechanics for Debt Securities” and “Description of Debt Securities We May Offer — Notices”.

DESCRIPTION OF PREFERRED STOCK WE MAY OFFER

Please note that in this section entitled “Description of Preferred Stock We May Offer”, references to “The Goldman Sachs Group, Inc.”, “we”, “our” and “us” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries. Also, in this section, references to “holders” mean those who own shares of preferred stock or depositary shares, as the case may be, registered in their own names, on the books that the registrar or we maintain for this purpose, and not those who own beneficial interests in shares registered in street name or in shares issued in book-entry form through one or more depositaries. Owners of beneficial interests in shares of preferred stock or depositary shares should read the section below entitled “Legal Ownership and Book-Entry Issuance”.

We may issue our preferred stock in one or more series, as described below. We may also “reopen” a previously issued series of preferred stock and issue additional preferred stock of that series. This section summarizes terms of the preferred stock that apply generally to all series. We describe most of the financial and other specific terms of your series in the applicable prospectus supplement accompanying this prospectus. Those terms may vary from the terms described here.

As you read this section, please remember that the specific terms of your series of preferred stock and any related depositary shares as described in your prospectus supplement will supplement and, if applicable, may modify or replace the general terms described in this section. If there are differences between your prospectus supplement and this prospectus, your prospectus supplement will control. Thus, the statements we make in this section may not apply to your series of preferred stock or any related depositary shares.

When we refer to a series of preferred stock, we mean all of the shares of preferred stock issued as part of the same series under a certificate of designations filed as part of our restated certificate of incorporation. When we refer to your prospectus supplement, we mean the prospectus supplement describing the specific terms of the preferred stock and any related depositary shares you purchase. The terms used in your prospectus supplement will have the meanings described in this prospectus, unless otherwise specified.

Our affiliates may resell preferred stock and depositary shares after their initial issuance in market-making transactions. We describe these transactions above under “Description of Debt Securities We May Offer — Information in Your Prospectus Supplement — Market-Making Transactions”.

Our Authorized Preferred Stock

Our authorized capital stock includes 150,000,000 shares of preferred stock, par value \$0.01 per share. We have 400,283 shares of noncumulative perpetual preferred stock (designated as fifteen separate series), \$25,000 liquidation preference per share (except for two series that have a liquidation preference of \$100,000), issued as of the date of this prospectus. The prospectus supplement with respect to any offered preferred stock will describe any preferred stock that may be issued and outstanding as of the date of the applicable prospectus supplement.

Preferred Stock Issued in Separate Series

Our board of directors is authorized to divide the preferred stock into series and, with respect to each series, to determine the designations, the powers, preferences and rights and the qualifications, limitations and restrictions of the series, including:

- dividend rights (which may be cumulative or non-cumulative);

Table of Contents

- conversion or exchange rights;
- voting rights;
- redemption rights and terms;
- liquidation preferences;
- sinking fund provisions;
- the serial designation of the series; and
- the number of shares constituting the series.

Subject to the rights of the holders of any series of preferred stock, the number of authorized shares of any series of preferred stock may be increased or decreased, but not below the number of shares of that series then outstanding, by resolution adopted by our board of directors and approved by the affirmative vote of the holders of a majority of the voting power of all outstanding shares of capital stock entitled to vote on the matter, voting together as a single class. No separate vote of the holders of any series of preferred stock is required for an increase or decrease in the number of authorized shares of that series.

Before we issue any series of preferred stock, our board of directors, or a committee of our board authorized to do so by our board, will adopt resolutions creating and designating the series and will file a certificate of designations stating the terms of the series with the Secretary of State of the State of Delaware. None of our stockholders will need to approve that amendment.

In addition, as described below under “— Fractional or Multiple Shares of Preferred Stock Issued as Depositary Shares”, we may, at our option, instead of offering whole individual shares of any series of preferred stock, offer depositary shares evidenced by depositary receipts, each representing a fraction of a share or some multiple of shares of the particular series of preferred stock issued and deposited with a depositary. The fraction of a share or multiple of shares of preferred stock which each depositary share represents will be stated in the prospectus supplement relating to any series of preferred stock offered through depositary shares.

The rights of holders of preferred stock may be adversely affected by the rights of holders of preferred stock that may be issued in the future. Our board of directors may cause shares of preferred stock to be issued in public or private transactions for any proper corporate purpose. Examples of proper corporate purposes include issuances to obtain additional financing for acquisitions and issuances to officers, directors and employees under their respective benefit plans. Shares of preferred stock we issue may have the effect of discouraging or making more difficult an acquisition of The Goldman Sachs Group, Inc. We may choose to issue preferred stock, together with our other securities described in this prospectus, in units.

Under existing interpretations of the Federal Reserve Board, if the holders of the preferred stock become entitled to vote for the election of directors because dividends on the preferred stock are in arrears, the preferred stock may then be deemed a “class of voting securities” and a holder of 25% or more of the preferred stock or a holder of 5% or more of the preferred stock that is otherwise a bank holding company may then be regulated as a “bank holding company” with respect to The Goldman Sachs Group, Inc. in accordance with the U.S. Bank Holding Company Act of 1956 (the “Bank Holding Company Act”). In addition, at such time:

- any bank holding company or foreign bank with a U.S. presence generally would be required to obtain the approval of the Federal Reserve Board under the Bank Holding Company Act to acquire or retain 5% or more of the preferred stock; and

Table of Contents

- any person other than a bank holding company may be required to obtain the approval of the Federal Reserve Board under the U.S. Change in Bank Control Act of 1978 to acquire or retain 10% or more of the preferred stock.

The right of The Goldman Sachs Group, Inc. to redeem any of the preferred stock is subject to any limitations established by the Federal Reserve Board. Currently, The Goldman Sachs Group, Inc. may not redeem preferred stock without having received the prior approval of the Federal Reserve Board under the capital rules applicable to it. The factors the Federal Reserve Board currently considers in evaluating a proposed redemption by a bank holding company include, among other things, the capital plans and stress tests submitted by the bank holding company, the bank holding company's ability to meet and exceed minimum regulatory capital ratios under stressed scenarios, its expected sources and uses of capital over the planning horizon (generally a period of two years) under baseline and stressed scenarios, and any potential impact of changes to its business plan and activities on its capital adequacy and liquidity, although the Federal Reserve Board may change these factors at any time.

Preferred stock will be fully paid and non-assessable when issued, which means that its holders will have paid their purchase price in full and that we may not ask them to surrender additional funds. Holders of preferred stock will not have preemptive or subscription rights to acquire more stock of The Goldman Sachs Group, Inc.

The transfer agent, registrar, dividend disbursing agent, calculation agent (if any) and redemption agent for shares of each series of preferred stock will be named in the prospectus supplement relating to that series, and The Goldman Sachs Group, Inc. may replace any or all of such agents and the registrar at any time without consent of the holders of preferred stock.

Rank

Shares of each series of preferred stock will rank equally with each other series of preferred stock and senior to our common stock with respect to dividends and distributions of assets. In addition, we will generally be able to pay dividends and distributions of assets to holders of our preferred stock only if we have satisfied our obligations on our indebtedness then due and payable.

Dividends

Holders of each series of preferred stock will be entitled to receive cash dividends when, as and if declared by our board of directors, from funds legally available for the payment of dividends. The rates and dates of payment of dividends for each series of preferred stock will be stated in the applicable prospectus supplement. Dividends will be payable to holders of record of preferred stock as they appear on our books on the record dates fixed by our board of directors. Dividends on any series of preferred stock may be cumulative or noncumulative, as set forth in the applicable prospectus supplement.

Redemption

If specified in an applicable prospectus supplement, a series of preferred stock may be redeemable at any time, in whole or in part, at our option or the holder's, and may be redeemed mandatorily.

Any restriction on the repurchase or redemption by us of our preferred stock, including while there is an arrearage in the payment of dividends, will be described in the applicable prospectus supplement.

Any partial redemptions of our preferred stock will be made in a way that our board of directors decides is equitable.

Table of Contents

Unless we default in the payment of the redemption price, dividends will cease to accrue after the redemption date on shares of our preferred stock called for redemption and all rights of holders of these shares will terminate except for the right to receive the redemption price.

Conversion or Exchange Rights

The prospectus supplement relating to any series of preferred stock that is convertible, exercisable or exchangeable will state the terms on which shares of that series are convertible into or exercisable or exchangeable for shares of common stock, another series of preferred stock or other securities of The Goldman Sachs Group, Inc. or debt or equity securities of third parties.

Liquidation Preference

Upon any voluntary or involuntary liquidation, dissolution or winding up of The Goldman Sachs Group, Inc., holders of each series of preferred stock will be entitled to receive distributions upon liquidation in the amount described in the applicable prospectus supplement, plus an amount equal to any accrued and unpaid dividends. These distributions will be made before any distribution is made on any securities ranking junior to the preferred stock with respect to liquidation, including our common stock. If the liquidation amounts payable relating to the preferred stock of any series and any other securities ranking on a parity regarding liquidation rights are not paid in full, the holders of the preferred stock of that series and the other securities will share in any distribution of our available assets on a ratable basis in proportion to the full liquidation preferences (which includes declared and unpaid dividends in the case of non-cumulative stock and unpaid, accrued, cumulative dividends, whether or not declared, in the case of cumulative stock) of each security. Holders of our preferred stock will not be entitled to any other amounts from us after they have received their full liquidation preference.

Voting Rights

- The holders of preferred stock of each series will have no voting rights, except:
- as stated in the applicable prospectus supplement and in the certificate of designations establishing the series; or
 - as required by applicable law.

Mergers and Similar Transactions Permitted; No Restrictive Covenants

The terms of the preferred stock will not include any restrictions on our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. The terms of the preferred stock also will not include any restrictions on our ability to put liens on our assets, including our interests in our subsidiaries.

Because we are a holding company, our ability to make payments on the preferred stock will depend in part on our ability to participate in distributions of assets from our subsidiaries. We discuss these matters above under “Description of Debt Securities We May Offer — We Are a Holding Company”.

Governing Law

The preferred stock will be governed by Delaware law.

Fractional or Multiple Shares of Preferred Stock Issued as Depositary Shares

We may choose to offer fractional shares or some multiple of shares of our preferred stock, rather than whole individual shares. If we decide to do so, we will issue the preferred stock in the form of

[Table of Contents](#)

depository shares. Each depository share would represent a fraction or multiple of a share of the preferred stock and would be evidenced by a depository receipt. We will issue depository shares under a deposit agreement between a depository, which we will appoint in our discretion, and us.

Deposit Agreement

We will deposit the shares of preferred stock to be represented by depository shares under a deposit agreement. The parties to the deposit agreement will be:

- The Goldman Sachs Group, Inc.;
- a bank or other financial institution selected by us and named in the applicable prospectus supplement, as preferred stock depository; and
- the holders from time to time of depository receipts issued under that depository agreement.

Each holder of a depository share will be entitled to all the rights and preferences of the underlying preferred stock, including, where applicable, dividend, voting, redemption, conversion and liquidation rights, in proportion to the applicable fraction or multiple of a share of preferred stock represented by the depository share. The depository shares will be evidenced by depository receipts issued under the deposit agreement. The depository receipts will be distributed to those persons purchasing the fractional or multiple shares of preferred stock. A depository receipt may evidence any number of whole depository shares.

For each series of outstanding preferred stock, we have filed a deposit agreement, including the form of depository receipt and a related letter agreement, with the SEC either as an exhibit to the relevant registration statement on Form 8-A or Form S-3, and in the future we may file additional deposit agreements, including the form of depository receipt, with the SEC, either as an exhibit to an amendment to the registration statement of which this prospectus forms a part or as an exhibit to a registration statement on Form 8-A. See “Available Information” above for information on how to obtain copies of documents filed by us with the SEC.

Dividends and Other Distributions

The preferred stock depository will distribute any cash dividends or other cash distributions received in respect of the deposited preferred stock to the record holders of depository shares relating to the underlying preferred stock in proportion to the number of depository shares owned by the holders. The preferred stock depository will distribute any property received by it other than cash to the record holders of depository shares entitled to those distributions, unless it determines that the distribution cannot be made proportionally among those holders or that it is not feasible to make a distribution. In that event, the preferred stock depository may, with our approval, sell the property and distribute the net proceeds from the sale to the holders of the depository shares in proportion to the number of depository shares they own.

The amounts distributed to holders of depository shares will be reduced by any amounts required to be withheld by the preferred stock depository or by us on account of taxes or other governmental charges.

Redemption of Preferred Stock

If we redeem preferred stock represented by depository shares, the preferred stock depository will redeem the depository shares from the proceeds it receives from the redemption, in whole or in part, of the preferred stock. The preferred stock depository will redeem the depository shares at a price per

Table of Contents

share equal to the applicable fraction or multiple of the redemption price per share of preferred stock. Whenever we redeem shares of preferred stock held by the preferred stock depositary, the preferred stock depositary will redeem as of the same date the number of depositary shares representing the redeemed shares of preferred stock. If fewer than all the depositary shares are to be redeemed, the preferred stock depositary will select the depositary shares to be redeemed by lot or ratably.

After the date fixed for redemption, the depositary shares called for redemption will no longer be deemed to be outstanding, and all rights of the holders of those shares will cease, except the right to receive the amount payable and any other property to which the holders were entitled upon the redemption. To receive this amount or other property, the holders must surrender the depositary receipts evidencing their depositary shares to the preferred stock depositary. Any funds that we deposit with the preferred stock depositary for any depositary shares that the holders fail to redeem will be returned to us after a period of two years from the date we deposit the funds.

Withdrawal of Preferred Stock

Unless the related depositary shares have previously been called for redemption, if the depositary shares are not issued in book-entry form, then any registered holder of depositary shares may receive the number of whole shares of the related series of preferred stock and any money or other property represented by those depositary receipts after surrendering the depositary receipts at the corporate trust office of the preferred stock depositary, paying any taxes, charges and fees provided for in the deposit agreement and complying with any other requirement of the deposit agreement. If the depositary shares are issued in book-entry form, only the single registered holder can make such a withdrawal. Holders of depositary shares making these withdrawals will be entitled to receive whole shares of preferred stock, but holders of whole shares of preferred stock will not be entitled to deposit that preferred stock under the deposit agreement or to receive depositary receipts for that preferred stock after withdrawal. If the depositary shares surrendered by the holder in connection with withdrawal exceed the number of depositary shares that represent the number of whole shares of preferred stock to be withdrawn, the preferred stock depositary will deliver to that holder at the same time a new depositary receipt evidencing the excess number of depositary shares.

Voting Deposited Preferred Stock

When the preferred stock depositary receives notice of any meeting at which the holders of any series of deposited preferred stock are entitled to vote, the preferred stock depositary will mail the information contained in the notice to the record holders of the depositary shares relating to the applicable series of preferred stock. Each record holder of the depositary shares on the record date, which will be the same date as the record date for the preferred stock, may instruct the preferred stock depositary to vote the amount of the preferred stock represented by the holder's depositary shares. To the extent possible, the preferred stock depositary will vote the amount of the series of preferred stock represented by depositary shares in accordance with the instructions it receives. We will agree to take all reasonable actions that the preferred stock depositary determines are necessary to enable the preferred stock depositary to vote as instructed. If the preferred stock depositary does not receive specific instructions from the holders of any depositary shares representing a series of preferred stock, it will vote all shares of that series held by it proportionately with instructions received.

Conversion of Preferred Stock

If the prospectus supplement relating to the depositary shares says that the deposited preferred stock is convertible into or exercisable or exchangeable for common stock, preferred stock of another series or other securities of The Goldman Sachs Group, Inc. or debt or equity securities of one or more third parties, the following will apply. The depositary shares, as such, will not be convertible into or

Table of Contents

exercisable or exchangeable for any securities of The Goldman Sachs Group, Inc. or any third party. Rather, any holder of the depositary shares may surrender the related depositary receipts to the preferred stock depositary with written instructions to instruct us to cause conversion, exercise or exchange of the preferred stock represented by the depositary shares into or for whole shares of common stock, shares of another series of preferred stock or other securities of The Goldman Sachs Group, Inc. or debt or equity securities of the relevant third party, as applicable. Upon receipt of those instructions and any amounts payable by the holder in connection with the conversion, exercise or exchange, we will cause the conversion, exercise or exchange using the same procedures as those provided for conversion, exercise or exchange of the deposited preferred stock. If only some of the depositary shares are to be converted, exercised or exchanged, a new depositary receipt or receipts will be issued for any depositary shares not to be converted, exercised or exchanged.

Amendment and Termination of the Deposit Agreement

We may amend the form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement at any time and from time to time by agreement with the preferred stock depositary. However, any amendment that imposes additional charges or materially and adversely alters any substantial existing right of the holders of depositary shares will not be effective unless the holders of at least a majority of the affected depositary shares then outstanding approve the amendment. We will make no amendment that impairs the right of any holder of depositary shares, as described above under “— Withdrawal of Preferred Stock”, to receive shares of the related series of preferred stock and any money or other property represented by those depositary shares, except in order to comply with mandatory provisions of applicable law. Holders who retain or acquire their depositary receipts after an amendment becomes effective will be deemed to have agreed to the amendment and will be bound by the amended deposit agreement.

The deposit agreement will automatically terminate if:

- all outstanding depositary shares have been redeemed or converted or exchanged for any other securities into which they or the underlying preferred stock are convertible or exchangeable; or
- a final distribution in respect of the preferred stock has been made to the holders of depositary shares in connection with any liquidation, dissolution or winding up of The Goldman Sachs Group, Inc.

We may terminate the deposit agreement at any time, and the preferred stock depositary will give notice of that termination to the registered holders of all outstanding depositary receipts not less than 30 days before the termination date. In that event, the preferred stock depositary will deliver or make available for delivery to registered holders of depositary shares, upon surrender of the depositary receipts evidencing the depositary shares, the number of whole or fractional shares of the related series of preferred stock as are represented by those depositary shares.

Charges of Preferred Stock Depositary; Taxes and Other Governmental Charges

We will pay the fees, charges and expenses of the preferred stock depositary provided in the deposit agreement to be payable by us. Holders of depositary receipts will pay any taxes and governmental charges and any charges provided in the deposit agreement to be payable by them, including a fee for the withdrawal of shares of preferred stock upon surrender of depositary receipts. If the preferred stock depositary incurs fees, charges or expenses for which it is not otherwise liable at the election of a holder of a depositary receipt or other person, that holder or other person will be liable for those fees, charges and expenses.

[Table of Contents](#)

Resignation and Removal of Depositary

The preferred stock depositary may resign at any time by giving us notice, and we may remove or replace the preferred stock depositary at any time.

Reports to Holders

We will deliver all required reports and communications to holders of the preferred stock to the preferred stock depositary. It will forward those reports and communications to the holders of depositary shares.

Limitation on Liability of the Preferred Stock Depositary

The preferred stock depositary will not be liable if it is prevented or delayed by law or any circumstances beyond its control in performing its obligations under the deposit agreement. The obligations of the preferred stock depositary under the deposit agreement will be limited to performance in good faith of its duties under the agreement, and it will not be obligated to prosecute or defend any legal proceeding in respect of any depositary shares, depositary receipts or shares of preferred stock unless satisfactory and reasonable protection from expenses and liability is furnished. This is called an indemnity. The preferred stock depositary may rely upon written advice of counsel or accountants, upon information provided by holders of depositary receipts or other persons believed to be competent and upon documents believed to be genuine.

Form of Preferred Stock and Depositary Shares

We may issue preferred stock in book-entry form. Preferred stock in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the shares of preferred stock represented by the global security. Those who own beneficial interests in shares of preferred stock will do so through participants in the depositary’s system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. However, beneficial owners of any preferred stock in book-entry form will have the right to obtain their shares in non-global form. We describe book-entry securities below under “Legal Ownership and Book-Entry Issuance”. All preferred stock will be issued in registered form.

We will issue depositary shares in book-entry form, to the same extent as we describe above for preferred stock. Depositary shares will be issued in registered form.

DESCRIPTION OF COMMON STOCK WE MAY OFFER

Please note that in this section entitled “Description of Common Stock We May Offer”, references to “The Goldman Sachs Group, Inc.”, “we”, “our” and “us” refer only to The Goldman Sachs Group, Inc. and not to its consolidated subsidiaries. Also, in this section, references to “holders” mean those who own shares of common stock registered in their own names, on the books that the registrar or we maintain for this purpose, and not those who own beneficial interests in shares registered in street name or in shares issued in book-entry form. Owners of beneficial interests in shares of common shares should read the section below entitled “Legal Ownership and Book-Entry Issuance”.

As of the date of this prospectus, we are authorized to issue up to 4,000,000,000 shares of common stock. As of January 31, 2023, we had 337,040,932 shares of common stock issued and outstanding.

The following summary is not complete. You should refer to the applicable provisions of our restated certificate of incorporation and the Delaware General Corporation Law for a complete statement and terms of the rights of our common stock.

Dividends

Subject to the preferential rights of any holders of any outstanding series of preferred stock, the holders of common stock, together with the holders of the nonvoting common stock, are entitled to such dividends and distributions, whether payable in cash or otherwise, as may be declared from time to time by our board of directors from legally available funds.

Voting Rights

Each holder of common stock is entitled to one vote for each share owned of record on all matters submitted to a vote of shareholders. There are no cumulative voting rights. Accordingly, the holders of a plurality of the shares of common stock voting in a contested election of directors can elect all the directors if they choose to do so, subject to any voting rights of holders of preferred stock to elect directors. In an uncontested director election, a director must receive a majority of the votes cast for or against the director to be elected.

Liquidation

Subject to the preferential rights of holders of any outstanding series of preferred stock, upon our liquidation, dissolution or winding-up and after payment of all prior claims, the holders of common stock, with the shares of the common stock and the nonvoting common stock being considered as a single class for this purpose, will be entitled to receive pro rata all our assets. Holders of common stock have no redemption or conversion rights or preemptive rights to purchase or subscribe for securities of The Goldman Sachs Group, Inc.

DESCRIPTION OF CAPITAL STOCK OF THE GOLDMAN SACHS GROUP, INC.

Pursuant to our restated certificate of incorporation, our authorized capital stock consists of 4,350,000,000 shares, each with a par value of \$0.01 per share, of which:

- 150,000,000 shares are designated as preferred stock,
 - 30,000 shares of which (designated as Floating Rate Non-Cumulative Preferred Stock, Series A) are issued, 29,999 of which are outstanding, as of the date of this prospectus with a \$25,000 liquidation preference per share,
 - 8,000 shares of which (designated as Floating Rate Non-Cumulative Preferred Stock, Series C) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share,
 - 54,000 shares of which (designated as Floating Rate Non-Cumulative Preferred Stock, Series D) are issued, 53,999 of which are outstanding, as of the date of this prospectus with a \$25,000 liquidation preference per share,
 - 7,667 of which (designated as Perpetual Non-Cumulative Preferred Stock, Series E) are issued and outstanding as of the date of this prospectus with a \$100,000 liquidation preference per share,
 - 1,615 of which (designated as Perpetual Non-Cumulative Preferred Stock, Series F) are issued and outstanding as of the date of this prospectus with a \$100,000 liquidation preference per share,
 - 40,000 of which (designated as 5.50% Fixed-to-Floating Non-Cumulative Preferred Stock, Series J) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share,
 - 28,000 of which (designated as 6.375% Fixed-to-Floating Non-Cumulative Preferred Stock, Series K) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share,
 - 26,000 of which (designated as 5.30% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series O) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share.
 - 60,000 of which (designated as 5.00% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series P) are issued and outstanding as of the date of this prospectus with a 25,000 liquidation preference per share.
 - 20,000 of which (designated as 5.50% Fixed-Rate Reset Non-Cumulative Preferred Stock, Series Q) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share.
 - 24,000 of which (designated as 4.95% Fixed-Rate Reset Non-Cumulative Preferred Stock, Series R) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share.
 - 14,000 of which (designated as 4.40% Fixed-Rate Reset Non-Cumulative Preferred Stock, Series S) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share.
 - 27,000 of which (designated as 3.80% Fixed-Rate Reset Non-Cumulative Preferred Stock, Series T) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share.

Table of Contents

- 30,000 of which (designated as 3.65% Fixed-Rate Reset Non-Cumulative Preferred Stock, Series U) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share.
- 30,000 of which (designated as 4.125% Fixed-Rate Reset Non-Cumulative Preferred Stock, Series V) are issued and outstanding as of the date of this prospectus with a \$25,000 liquidation preference per share.
- 4,000,000,000 shares are designated as common stock, 337,040,932 shares of which were outstanding as of January 31, 2023; and
- 200,000,000 shares are designated as nonvoting common stock, none of which are outstanding.

All outstanding shares of common stock are validly issued, fully paid and nonassessable.

Information regarding the shareholders’ agreement containing provisions relating to the voting and disposition of certain shares of common stock held by our participating managing directors will be incorporated by reference into Part III, Item 12 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which will be incorporated by reference into this prospectus.

Preferred Stock

Our authorized capital stock includes 150,000,000 shares of preferred stock. Our board of directors is authorized to divide the preferred stock into series and, with respect to each series, to determine the designations and the powers, preferences and rights, and the qualifications, limitations and restrictions thereof, including the dividend rights, conversion or exchange rights, voting rights, redemption rights and terms, liquidation preferences, sinking fund provisions and the number of shares constituting the series. Our board of directors could, without shareholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power of the holders of common stock and which could have certain anti-takeover effects.

Common Stock

Each holder of common stock is entitled to one vote for each share owned of record on all matters submitted to a vote of shareholders. There are no cumulative voting rights. Accordingly, the holders of a plurality of the shares of common stock voting in a contested election of directors can elect all the directors if they choose to do so, subject to any voting rights of holders of preferred stock to elect directors. In an uncontested director election, a director must receive a majority of the votes cast for or against the director to be elected.

Subject to the preferential rights of any holders of any outstanding series of preferred stock, the holders of common stock, together with the holders of the nonvoting common stock, are entitled to such dividends and distributions, whether payable in cash or otherwise, as may be declared from time to time by our board of directors from legally available funds. Subject to the preferential rights of holders of any outstanding series of preferred stock, upon our liquidation, dissolution or winding-up and after payment of all prior claims, the holders of common stock, with the shares of the common stock and the nonvoting common stock being considered as a single class for this purpose, will be entitled to receive pro rata all our assets. Holders of common stock have no redemption or conversion rights or preemptive rights to purchase or subscribe for securities of The Goldman Sachs Group, Inc.

Nonvoting Common Stock

The nonvoting common stock has the same rights and privileges as, ranks equally and shares proportionately with, and is identical in all respects as to all matters to, the common stock, except that the nonvoting common stock has no voting rights other than those voting rights required by law.

Limitation of Liability and Indemnification Matters

Our charter provides that a director of The Goldman Sachs Group, Inc. will not be liable to The Goldman Sachs Group, Inc. or its shareholders for monetary damages for breach of fiduciary duty as a director, except in certain cases where liability is mandated by the Delaware General Corporation Law. Our by-laws provide for indemnification, to the fullest extent permitted by law, of any person made or threatened to be made a party to any action, suit or proceeding by reason of the fact that such person is or was a director of The Goldman Sachs Group, Inc., or an officer appointed by resolution of our board of directors, or is or was a member of the shareholders' committee acting under the shareholders' agreement against all expenses, liabilities, losses and claims actually incurred or suffered by such person in connection with the action, suit or proceeding. Our by-laws also provide that, to the extent authorized from time to time in a resolution adopted by our board of directors (including a resolution authorizing officers of The Goldman Sachs Group, Inc. to grant such rights), The Goldman Sachs Group, Inc. may provide to any one or more persons, including, without limitation, employees and other agents of The Goldman Sachs Group, Inc. or any subsidiary or other enterprise, rights of indemnification and to receive payment or reimbursement of expenses, including attorneys' fees, with any such rights subject to the terms, conditions and limitations established pursuant to the board resolution.

Charter Provisions Approving Certain Actions

Our charter provides that our board of directors may determine to take the following actions, in its sole discretion, and The Goldman Sachs Group, Inc. and each shareholder of The Goldman Sachs Group, Inc. will, to the fullest extent permitted by law, be deemed to have approved and ratified, and waived any claim relating to, the taking of any of these actions:

- causing The Goldman Sachs Group, Inc. to register with the SEC for resale shares of common stock held by our directors, employees and former directors and employees and our subsidiaries and affiliates and former partners and employees of The Goldman Sachs Group, L.P. and its subsidiaries and affiliates; and
- making payments to, and other arrangements with, certain former limited partners of The Goldman Sachs Group, Inc., including managing directors who were profit participating limited partners, in order to compensate them for, or to prevent, significantly disproportionate adverse tax or other consequences arising out of our incorporation.

Section 203 of the Delaware General Corporation Law

The Goldman Sachs Group, Inc. is subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes a merger, asset sale or a transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns (or, in certain cases, within the preceding three years, did own) 15% or more of the corporation's outstanding voting stock. Under Section 203, a business combination between The Goldman Sachs Group, Inc. and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- prior to the stockholder becoming an interested stockholder, the board of directors of The Goldman Sachs Group, Inc. must have previously approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- on consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of The

[**Table of Contents**](#)

Goldman Sachs Group, Inc. outstanding at the time the transaction commenced, excluding, for purposes of determining the number of shares outstanding (but not the outstanding voting stock owned by the interested stockholder), those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- at or subsequent to such time the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66²/₃% of the outstanding voting stock which is not owned by the interested stockholder.

Our board of directors has adopted a resolution providing that the shareholders' agreement will not create an "interested stockholder".

Certain Anti-Takeover Matters

Our charter and by-laws include a number of provisions that may have the effect of encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include:

Constituency Provision

In accordance with our charter, a director of The Goldman Sachs Group, Inc. may (but is not required to) in taking any action (including an action that may involve or relate to a change or potential change in control of The Goldman Sachs Group, Inc.), consider, among other things, the effects that The Goldman Sachs Group, Inc.'s actions may have on other interests or persons (including its employees, former partners of The Goldman Sachs Group, L.P. and the community) in addition to our shareholders.

Advance Notice Requirements

Our by-laws establish advance notice procedures with regard to shareholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of shareholders of The Goldman Sachs Group, Inc. These procedures provide that notice of such shareholder proposals must be timely given in writing to the Secretary of The Goldman Sachs Group, Inc. prior to the meeting at which the action is to be taken. The time periods vary depending on the nature of the proposal. The notice must contain certain information specified in the by-laws and must otherwise comply with the by-laws.

Limitation on Ability of Shareholders to Call Special Meetings

Our charter and by-laws provide procedures pursuant to which holders of record of not less than 25% of the voting power of outstanding shares of our common stock may call a special meeting of shareholders. Our by-laws impose certain procedural requirements on shareholders requesting such a meeting (including the provision of the same information required for shareholder proposals at annual meetings under our advance notice by-law provisions described above), as well as qualifications designed to prevent duplicative and unnecessary meetings.

No Written Consent of Shareholders

Our charter requires all shareholder actions to be taken by a vote of the shareholders at an annual or special meeting, and does not permit our shareholders to act by written consent without a meeting.

Blank Check Preferred Stock

Our charter provides for 150,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable the board of directors to render more difficult or to discourage an attempt to obtain control of Goldman Sachs by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, the board of directors were to determine that a takeover proposal is not in the best interests of Goldman Sachs, the board of directors could cause shares of preferred stock to be issued without shareholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquiror or insurgent shareholder or shareholder group. In this regard, the charter grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of such holders and may have the effect of delaying, deterring or preventing a change in control of Goldman Sachs.

Listing

The common stock of The Goldman Sachs Group, Inc. is listed on the NYSE under the ticker symbol “GS”.

Transfer Agent

The transfer agent for the common stock is Computershare.

LEGAL OWNERSHIP AND BOOK-ENTRY ISSUANCE

In this section, we describe special considerations that will apply to registered securities issued in global — *i.e.*, book-entry — form. First we describe the difference between legal ownership and indirect ownership of registered securities. Then we describe special provisions that apply to global securities.

Who Is the Legal Owner of a Registered Security?

Each debt security, warrant, purchase contract, unit, share of preferred stock, depositary share and common stock in registered form will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. We refer to those who have securities registered in their own names, on the books that we or the trustee, warrant agent or other agent maintain for this purpose, as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those who, indirectly through others, own beneficial interests in securities that are not registered in their own names as indirect owners of those securities. As we discuss below, indirect owners are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect owners.

Book-Entry Owners

We will issue each security in book-entry form only. This means securities will be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary’s book-entry system. These participating institutions, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Under each indenture, only the person in whose name a security is registered is recognized as the holder of that security. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities and we will make all payments on the securities, including deliveries of any property other than cash, to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary’s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect owners, and not holders, of the securities.

Street Name Owners

In the future we may terminate a global security or issue securities initially in non-global form. In these cases, investors may choose to hold their securities in their own names or in street name. Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities and we will make all payments on those securities, including deliveries of any property other than cash, to them. These institutions pass along the payments they receive to their customers who

Table of Contents

are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect owners, not holders, of those securities.

Legal Holders

Our obligations and the obligations of the trustee under any indenture and the obligations, if any, of any warrant agents and unit agents and any other third parties employed by us, the trustee or any of those agents, run only to the holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect owner of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for that payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect owners but does not do so. Similarly, if we want to obtain the approval of the holders for any purpose — e.g., to amend the indenture for a series of debt securities or warrants or the warrant agreement for a series of warrants or to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture — we would seek the approval only from the holders, and not the indirect owners, of the relevant securities. Whether and how the holders contact the indirect owners is up to the holders.

When we refer to “you” in this prospectus, we mean those who invest in the securities being offered by this prospectus, whether they are the holders or only indirect owners of those securities. When we refer to “your securities” in this prospectus, we mean the securities in which you will hold a direct or indirect interest.

Special Considerations for Indirect Owners

If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- whether and how you can instruct it to exercise any rights to purchase or sell warrant property under a warrant or purchase contract property under a purchase contract or to exchange or convert a security for or into other property;
- how it would handle a request for the holders’ consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depositary’s rules and procedures will affect these matters.

What Is a Global Security?

We will issue each security in book-entry form only. Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of one or more financial

Table of Contents

institutions or clearing systems, or their nominees, which we select. A financial institution or clearing system that we select for any security for this purpose is called the “depository” for that security. A security will usually have only one depository but it may have more.

Each series of securities will have one or more of the following as the depositories:

- The Depository Trust Company, New York, New York, which is known as “DTC”;
- a financial institution holding the securities on behalf of Euroclear Bank SA/NV, which is known as “Euroclear”;
- a financial institution holding the securities on behalf of Clearstream Banking, *société anonyme*, which is known as “Clearstream”; and
- any other clearing system or financial institution named in the applicable prospectus supplement.

The depositories named above may also be participants in one another’s clearing systems. Thus, for example, if DTC is the depository for a global security, investors may hold beneficial interests in that security through Euroclear or Clearstream, as DTC participants. The depository or depositories for your securities will be named in your prospectus supplement; if none is named, the depository will be DTC.

A global security may represent one or any other number of individual securities. Generally, all securities represented by the same global security will have the same terms. We may, however, issue a global security that represents multiple securities of the same kind, such as debt securities, that have different terms and are issued at different times. We call this kind of global security a master global security. Your prospectus supplement will not indicate whether your securities are represented by a master global security.

A global security may not be transferred to or registered in the name of anyone other than the depository or its nominee, unless special termination situations arise. We describe those situations below under “— Holder’s Option to Obtain a Non-Global Security; Special Situations When a Global Security Will Be Terminated”. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

The depository, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only indirect interests in a global security. Indirect interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depository or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect owner of an interest in the global security.

Special Considerations for Global Securities

As an indirect owner, an investor’s rights relating to a global security will be governed by the account rules of the depository and those of the investor’s financial institution or other intermediary through which it holds its interest (e.g., Euroclear or Clearstream, if DTC is the depository), as well as general laws relating to securities transfers. We do not recognize this type of investor or any intermediary as a holder of securities and instead deal only with the depository that holds the global security.

Table of Contents

If securities are issued only in the form of a global security, an investor should be aware of the following:

- An investor cannot cause the securities to be registered in his or her own name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- An investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above under “— Who Is the Legal Owner of a Registered Security?”;
- An investor may not be able to sell interests in the securities to some insurance companies and other institutions that are required by law to own their securities in non-book-entry form;
- An investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- The depositary’s policies will govern payments, deliveries, transfers, exchanges, notices and other matters relating to an investor’s interest in a global security, and those policies may change from time to time. We, the trustee and any warrant agents and unit agents will have no responsibility for any aspect of the depositary’s policies, actions or records of ownership interests in a global security. We, the trustee and any warrant agents and unit agents also do not supervise the depositary in any way;
- The depositary will require that those who purchase and sell interests in a global security within its book-entry system use immediately available funds and your broker or bank may require you to do so as well; and
- Financial institutions that participate in the depositary’s book-entry system and through which an investor holds its interest in the global securities, directly or indirectly, may also have their own policies affecting payments, deliveries, transfers, exchanges, notices and other matters relating to the securities, and those policies may change from time to time. For example, if you hold an interest in a global security through Euroclear or Clearstream, when DTC is the depositary, Euroclear or Clearstream, as applicable, will require those who purchase and sell interests in that security through them to use immediately available funds and comply with other policies and procedures, including deadlines for giving instructions as to transactions that are to be effected on a particular day. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the policies or actions or records of ownership interests of any of those intermediaries.

Holder’s Option to Obtain a Non-Global Security; Special Situations When a Global Security Will Be Terminated

If we issue any series of securities in book-entry form but we choose to give the beneficial owners of that series the right to obtain non-global securities, any beneficial owner entitled to obtain non-global securities may do so by following the applicable procedures of the depositary, any transfer agent or registrar for that series and that owner’s bank, broker or other financial institution through which that owner holds its beneficial interest in the securities. For example, in the case of a global security representing preferred stock or depositary shares, a beneficial owner will be entitled to obtain a non- global security representing its interest by making a written request to the transfer agent or other agent designated by us. If you are entitled to request a non-global certificate and wish to do so, you will need to allow sufficient lead time to enable us or our agent to prepare the requested certificate.

In addition, in a few special situations described below, a global security will be terminated and interests in it will be exchanged for certificates in non-global form representing the securities it

Table of Contents

represented. After that exchange, the choice of whether to hold the securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in a global security transferred on termination to their own names, so that they will be holders. We have described the rights of holders and street name investors above under “— Who Is the Legal Owner of a Registered Security?”.

The special situations for termination of a global security are as follows:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 60 days;
- if we notify the trustee, warrant agent or unit agent, as applicable, that we wish to terminate that global security; or
- in the case of a global security representing debt securities or warrants issued under an indenture, if an event of default or covenant breach has occurred with regard to these debt securities and has not been cured or waived.

DTC’s current rules provide that it would notify its participants of a request by us to terminate a global security, but will only withdraw beneficial interests from the global security at the request of each DTC participant.

If a global security is terminated, only the depositary, and not we, the trustee for any debt securities, the warrant agent for any warrants or the unit agent for any units, is responsible for deciding the names of the institutions in whose names the securities represented by the global security will be registered and, therefore, who will be the holders of those securities.

Considerations Relating to Euroclear and Clearstream

Euroclear and Clearstream are securities clearing systems in Europe. Both systems clear and settle securities transactions between their participants through electronic, book-entry delivery of securities against payment.

Euroclear and Clearstream may be depositaries for a global security. In addition, if DTC is the depositary for a global security, Euroclear and Clearstream may hold interests in the global security as participants in DTC.

As long as any global security is held by Euroclear or Clearstream, as depositary, you may hold an interest in the global security only through an organization that participates, directly or indirectly, in Euroclear or Clearstream. If Euroclear or Clearstream is the depositary for a global security and there is no depositary in the United States, you will not be able to hold interests in that global security through any securities clearance system in the United States.

Payments, deliveries, transfers, exchanges, notices and other matters relating to the securities made through Euroclear or Clearstream must comply with the rules and procedures of those systems. Those clearing systems could change their rules and procedures at any time. We do not have control over those systems or their participants, and we do not take responsibility for their activities. Transactions between participants in Euroclear or Clearstream, on one hand, and participants in DTC, on the other hand, when DTC is the depositary, would also be subject to DTC’s rules and procedures.

Special Timing Considerations for Transactions in Euroclear and Clearstream

Investors will be able to make and receive through Euroclear and Clearstream payments, deliveries, transfers, exchanges, notices and other transactions involving any securities held through

those clearing systems only on days when those systems are open for business. These clearing systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States.

In addition, because of time-zone differences, U.S. investors who hold their interests in the securities through these clearing systems and wish to transfer their interests, or to receive or make a payment or delivery or exercise any other right with respect to their interests, on a particular day may find that the transaction will not be effected until the next business day in Luxembourg or Brussels, as applicable. Thus, investors who wish to exercise rights that expire on a particular day may need to act before the expiration date. In addition, investors who hold their interests through both DTC and Euroclear or Clearstream may need to make special arrangements to finance any purchases or sales of their interests between the U.S. and European clearing systems, and those transactions may settle later than would be the case for transactions within one clearing system.

CONSIDERATIONS RELATING TO FLOATING RATE SECURITIES

Certain Risks Related to Outstanding USD LIBOR-linked Securities

We have offered and sold securities prior to the date of this prospectus for which USD LIBOR is the base rate or is referenced in the calculation of the base rate (“LIBOR-linked securities”). This prospectus may be used in ongoing market-making transactions in our outstanding LIBOR-linked securities. The U.K. Financial Conduct Authority (“FCA”) and the administrator of LIBOR have announced that the publication of the most commonly used USD LIBOR settings will cease to be provided or cease to be representative after June 30, 2023. The Adjustable Interest Rate (LIBOR) Act (the “LIBOR Act”), enacted in March 2022, provides a statutory framework to replace the most commonly used USD LIBOR settings with a benchmark rate based on the Secured Overnight Financing Rate (“SOFR”) for contracts governed by U.S. law that have no fallbacks or fallbacks that would require the use of a poll or LIBOR-based rate. In December 2022, the Federal Reserve Board adopted a rule identifying different SOFR-based replacement rates for financial contracts subject to the LIBOR Act, including cash instruments such as floating-rate notes and preferred stock, after June 30, 2023. With respect to any specific LIBOR-linked security, the effects of these developments, or any future legal, regulatory, or market developments related to the cessation of LIBOR, will depend on the benchmark transition provisions, if any, applicable to that security, and you should refer to the prospectus for that security for more details regarding any applicable benchmark transition provisions. In some cases, the LIBOR-linked securities will be subject to the LIBOR Act and the implementing rule promulgated by the Federal Reserve Board, with SOFR or CME Term SOFR for the corresponding tenor, plus, in each case, the applicable tenor spread adjustment applying as the replacement rate as a matter of law. In addition, in some cases, our affiliate, GS&Co., may act as the calculation agent with respect to certain LIBOR-linked securities and the benchmark transition provisions may allow GS&Co., as calculation agent, to select the replacement rate for these LIBOR-linked securities in its discretion, and in selecting the replacement rate potential conflicts of interest may exist between GS&Co. and you. In some cases, a third party may act as the calculation agent with respect to certain LIBOR-linked securities and the benchmark transition provisions may allow the calculation agent to select the replacement rate for these LIBOR-linked securities. There can be no assurance as to which replacement rate the calculation agent may select for these securities. Reference rates based on SOFR, including CME Term SOFR, differ from LIBOR, and the transition of the reference rates in LIBOR-linked securities from LIBOR to a benchmark rate based on SOFR may adversely affect the market price and liquidity of the LIBOR-linked securities. See “Certain Risks Related to SOFR” for additional information about SOFR.

Certain Risks Related to SOFR

On June 22, 2017, the Alternative Reference Rates Committee (“ARRC”) convened by the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York identified SOFR, a broad U.S. treasuries repurchase financing rate to be published by the Federal Reserve Bank of New York, as the rate that, in the consensus view of the ARRC, represented best practice for use in certain new U.S. dollar derivatives and other financial contracts. SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. treasury securities and has been published by the Federal Reserve Bank of New York since April 2018. The Federal Reserve Bank of New York has also published historical indicative Secured Overnight Financing Rates going back to 2014. Investors should not rely on any historical changes or trends in SOFR as an indicator of future changes in SOFR.

Because SOFR is published by the Federal Reserve Bank of New York based on data received from other sources, we have no control over its determination, calculation or publication. The Federal Reserve Bank of New York notes on its publication page for SOFR that use of SOFR is subject to important limitations and disclaimers, including that the Federal Reserve Bank of New York may alter the methods of calculation, publication schedule, rate revision practices or availability of SOFR at any

Table of Contents

time without notice. There can be no guarantee, particularly given its relatively recent introduction, that SOFR will not be discontinued or fundamentally altered in a manner that is materially adverse to the interests of investors in SOFR-linked floating rate securities. If the manner in which SOFR is calculated is changed, that change may result in a reduction of the amount of interest payable on SOFR-linked floating rate securities and the trading prices of such securities. In addition, the Federal Reserve Bank of New York may withdraw, modify or amend published SOFR data in its sole discretion and without notice. The interest rate for any day will not be adjusted for any modifications or amendments to SOFR data that the Federal Reserve Bank of New York may publish after the interest rate for that day has been determined.

Additionally, daily changes in SOFR have, on occasion, been more volatile than daily changes in other benchmark or market rates. Although occasional, increased daily volatility in SOFR would not necessarily lead to more volatile interest payments, the return on and value of SOFR-linked floating rate securities may fluctuate more than floating rate securities that are linked to less volatile rates. In addition, the volatility of SOFR has reflected the underlying volatility of the overnight U.S. Treasury repo market. The Federal Reserve Bank of New York has at times conducted operations in the overnight U.S. Treasury repo market in order to help maintain the federal funds rate within a target range. There can be no assurance that the Federal Reserve Bank of New York will continue to conduct such operations in the future, and the duration and extent of any such operations is inherently uncertain. The effect of any such operations, or of the cessation of such operations to the extent they are commenced, is uncertain and could be materially adverse to investors in SOFR-linked floating rate securities.

Since SOFR is a relatively new reference rate, SOFR-linked floating rate securities may not have an established trading market when issued and an established trading market in each case may never develop or may not be very liquid. Market terms for floating-rate securities linked to SOFR, such as the spread over the base rate reflected in interest rate provisions, the manner of calculating a forward-looking term rate, or the manner of compounding the base rate, may evolve over time, and trading prices of such securities may be lower than those of later-issued SOFR-linked floating rate securities as a result. Similarly, if SOFR does not prove to be widely used in floating rate securities, the trading price of SOFR-linked floating rate securities may be lower than those of securities linked to reference rates that are more widely used. Investors in such securities may not be able to sell such securities at all or may not be able to sell such securities at prices that will provide them with a yield comparable to similar investments that have a developed secondary market, and may consequently suffer from increased pricing volatility and market risk.

The Calculation Agent Will Have the Authority to Make Determinations That Could Affect the Market Value of Your Floating Rate Securities

If GS&Co. is named as calculation agent for your floating rate securities, GS&Co. will make determinations with respect to the floating rate securities as specified herein and in your prospectus supplement and may have discretion in calculating the amounts payable in respect of the floating rate securities. If GS&Co. determines that a benchmark replacement date with respect to LIBOR-linked floating rate securities or SOFR-linked floating rate securities has occurred, it will determine, among other things, the applicable benchmark replacement, the applicable benchmark replacement adjustment, and the applicable benchmark replacement conforming changes, and such determinations will be conclusive and binding absent manifest error. The exercise of this discretion by GS&Co. could adversely affect the value of your floating rate securities and may present GS&Co. with a conflict of interest. We may change the calculation agent at any time without notice, and the calculation agent may resign as calculation agent at any time upon 60 days' written notice to us.

Special Considerations Relating Compounded CORRA Debt Securities

We use the term “compounded CORRA debt securities” to mean any of the floating rate debt securities described in this prospectus in which compounded CORRA (Index) or compounded CORRA (Daily) is the base rate. Investors should consider the following risks before investing in compounded CORRA debt securities.

Risks Related To The Replacement Of CORRA

If the calculation agent determines that a CORRA Cessation Event and a CORRA Cessation Effective Date have occurred with respect to compounded CORRA, interest on the compounded CORRA debt securities will be calculated using a reference rate other than compounded CORRA.

If the calculation agent determines that a CORRA Cessation Event and a related CORRA Cessation Effective Date have occurred with respect to compounded CORRA, the calculation agent will determine an Applicable CORRA Fallback Rate and related adjustments to such rate and other terms and provisions of the compounded CORRA debt securities, which shall be conclusive and binding. Any of the factors noted above could adversely affect the rate of interest on the compounded CORRA debt securities, which could adversely affect the value of, return on and trading market for the compounded CORRA debt securities.

The Applicable CORRA Fallback Rate for the compounded CORRA debt securities may not be a suitable replacement for CORRA.

The terms of the compounded CORRA debt securities provide for a waterfall of alternative rates to be used to determine the rate of interest on the compounded CORRA debt securities if a CORRA Cessation Event and a related CORRA Cessation Effective Date occur with respect to compounded CORRA. The first alternative rate to compounded CORRA in the waterfall is the CAD Recommended Rate, which is the rate recommended as the replacement for CORRA by a committee officially endorsed or convened by the Bank of Canada for the purpose of recommending a replacement for CORRA. If the CAD Recommended Rate is not available at the time of a CORRA Cessation Event and related CORRA Cessation Effective Date, or if a CAD Recommended Rate is available at such time and a Fallback Index Cessation Effective Date and related Fallback Index Cessation Effective Date subsequently occurs with respect to it, the next alternative rate in the waterfall is the BOC Target Rate, which is the Bank of Canada’s Target for the Overnight Rate as set by the Bank of Canada and published on the Bank of Canada’s website. Uncertainty with respect to market conventions related to the calculation of these Applicable CORRA Fallback Rates and whether either alternative reference rate is a suitable replacement or successor for compounded CORRA may adversely affect the value of, return on and trading market for the compounded CORRA debt securities.

There is no assurance that the characteristics of any of the alternative rates for compounded CORRA will be similar to those of compounded CORRA, or that any such alternative rate will produce the economic equivalent of compounded CORRA as a reference rate for interest on the compounded CORRA debt securities. Although the CORRA fallback provisions provide for term and spread adjustments to the Applicable CORRA Fallback Rate- based and other rates in order to attempt to make the resulting rate comparable to compounded CORRA, such adjustments will not necessarily make the alternative rate equivalent to compounded CORRA.

The calculation agent will have authority to make changes and adjustments that could affect the value of, return on and trading market for the compounded CORRA debt securities.

Upon the occurrence of a CORRA Cessation Event and a related CORRA Cessation Effective Date, the calculation agent will make changes and adjustments as set forth under the sections entitled

Table of Contents

“—Calculation of Interest in Debt Securities—Floating Rate Debt Securities—CORRA (Index)” and “—CORRA(Daily)” above that may adversely affect the value of, return on and trading market for the compounded CORRA debt securities. Although the calculation agent will exercise judgment in good faith when performing such functions, potential conflicts of interest may exist between the calculation agent and you.

The composition and characteristics of the Applicable CORRA Fallback Rates are not the same as those of CORRA, and the Applicable CORRA Fallback Rates are not expected to be a comparable substitute or replacement for CORRA.

If a CORRA Cessation Event and a related CORRA Cessation Effective Date occur with respect to compounded CORRA, it is expected that one of the Applicable CORRA Fallback Rates will be used to determine the interest payable on the compounded CORRA debt securities. The composition and characteristics of such Applicable CORRA Fallback Rate may not be the same as those of CORRA. As a result, there can be no assurance that any Applicable CORRA Fallback Rate will perform in the same way as CORRA, including, without limitation, as a result of changes in interest and yield rates in the market, bank credit risk, market volatility or global or regional economic, financial, political, regulatory, judicial or other events. For the same reasons, the Applicable CORRA Fallback Rate is not expected to be a comparable substitute or replacement for CORRA.

Any failure of CORRA to maintain market acceptance could adversely affect the value of, return on and trading market for the compounded CORRA debt securities.

As a rate based on transactions secured by Government of Canada treasury bills and bonds, CORRA does not measure unsecured corporate credit risk and, as a result, is less likely to correlate with the unsecured short-term funding costs of corporations. This may mean that market participants would not consider compounded CORRA a suitable substitute or successor for CDOR, which may, in turn, lead to lessened market acceptance of compounded CORRA. Further, multiple market conventions with respect to the implementation of compounded CORRA as a base rate for floating rate debt securities or other securities may develop. Accordingly, the specific formula and related conventions (for example, observation periods) used for the compounded CORRA debt securities may not be widely adopted by other market participants, if at all. Adoption of a different method by the market with respect to these determinations could adversely affect the return on, value of and market for the debt securities.

In addition, market participants and relevant working groups are exploring alternative reference rates based on different applications of CORRA, including term CORRA reference rates (which seek to measure the market’s forward expectation of an average CORRA rate over a designated term). The market or a significant part thereof may adopt an application of CORRA (including compounded CORRA) that differs significantly from that used in relation to the compounded CORRA debt securities, which could result in reduced liquidity or otherwise affect the market price of the debt securities. Furthermore, the methodology for calculating compounded CORRA for other floating rate debt securities that we may issue may change and we may in the future issue other floating rate debt securities referencing CORRA or Compounded CORRA that differ materially in terms of interest determination when compared with any previous CORRA-referenced floating rate debt securities. The continued development of CORRA (including compounded CORRA) as an interest reference rate for the capital markets, as well as continued development of CORRA-based rates for such market and the market infrastructure for adopting such rates, could result in reduced liquidity or increased volatility or could otherwise affect the market price of any CORRA-referenced debt securities from time to time.

In addition, the manner of calculation and related conventions with respect to the determination of interest rates based on CORRA in floating rate debt securities markets may differ materially compared

[Table of Contents](#)

with the manner of calculation and related conventions with respect to the determination of interest rates based on CORRA in other markets, such as the derivatives and loan markets. Investors should carefully consider how any mismatch between the adoption of CORRA reference rates across these markets may impact any hedging or other financial arrangements which they may put in place in connection with any acquisition, holding or disposal of securities referencing compounded CORRA.

Furthermore, the interest rate on securities which reference compounded CORRA is only capable of being determined on the interest determination date near the end of the relevant interest period and immediately or shortly prior to the relevant interest payment date. It may be difficult for investors in securities which reference compounded CORRA to reliably estimate the amount of interest which will be payable on such securities in advance of the interest determination date, and some investors may be unable or unwilling to trade such securities without changes to their information technology systems, both of which factors could adversely impact the liquidity of such securities.

Since CORRA is a relatively new reference rate, securities linked to CORRA may have no established trading market when issued, and an established trading market may never develop or may not be very liquid. Market terms for debt securities indexed to CORRA, such as the spread over the reference rate reflected in interest rate provisions, may evolve over time, and trading prices of such securities may be lower than those of later-issued debt securities linked to CORRA as a result. Further, if CORRA does not prove to be widely used in securities like the compounded CORRA debt securities, the trading price of such securities may be lower than those of debt securities linked to other indices or reference rates that are more widely used. Investors in such securities may not be able to sell such securities at all or may not be able to sell such securities at prices that will provide them with a yield comparable to similar investments that have a developed secondary market and may consequently suffer from increased pricing volatility and market risk.

CORRA may be modified or discontinued, which could adversely affect the value of, return on and trading market for the compounded CORRA debt securities.

The Bank of Canada has only been the administrator of CORRA since June 2020 and only commenced publishing the CORRA Compounded Index in April 2021. The Bank of Canada may make methodological or other changes that could change the value of CORRA or CORRA Compounded Index, including changes related to the method by which CORRA or CORRA Compounded Index is calculated, eligibility criteria applicable to the transactions used to calculate CORRA or Compounded CORRA or timing related to the publication of CORRA or Compounded CORRA Index. In addition, CORRA and CORRA Compounded Index are published by the Bank of Canada based on data received from sources other than us, and we have no control over the methods of calculation, publication schedule, rate revision practices or availability of CORRA or CORRA Compounded Index. If interest payable on any floating rate debt securities references compounded CORRA and the manner in which CORRA or CORRA Compounded Index is calculated is changed, that change may result in a reduction of the amount of interest payable on the compounded CORRA debt securities, which may adversely affect the trading prices on the compounded CORRA debt securities. The administrator of CORRA may withdraw, modify, amend, suspend or discontinue the calculation or dissemination of CORRA or CORRA Compounded Index in its sole discretion and without notice and has no obligation to consider the interests of holders of the compounded CORRA debt securities or beneficial owners of interests in the compounded CORRA debt securities in calculating, withdrawing, modifying, amending, suspending or discontinuing CORRA or CORRA Compounded Index.

The Calculation Agent Will Have the Authority to Make Determinations That Could Affect the Market Value of the Compounded CORRA Debt Securities.

If GS&Co. is named as calculation agent for the compounded CORRA debt securities, GS&Co. will make determinations with respect to the compounded CORRA debt securities as specified in this

[Table of Contents](#)

prospectus and may have discretion in calculating the amounts payable in respect of the compounded CORRA debt securities. If GS&Co. determines that CORRA has been discontinued, then it will determine, among other things, the substitute or successor base rate, any adjustment factor needed to make such substitute or successor base rate comparable to CORRA, the business day convention, the definition of business day, the interest determination date to be used and any other relevant methodology for calculating such substitute or successor base rate, and such determinations will be conclusive and binding absent manifest error. The exercise of this discretion by GS&Co. could adversely affect the value of the compounded CORRA debt securities and may present GS&Co. with a conflict of interest. We may change the calculation agent at any time without notice, and GS&Co. may resign as calculation agent at any time upon 60 days' written notice to us. The calculation agent will have authority to make changes and adjustments that could affect the value of, return on and trading market for the compounded CORRA debt securities.

CONSIDERATIONS RELATING TO INDEXED SECURITIES

We use the term “indexed securities” to mean any of the securities described in this prospectus, or any units that include securities, whose value is linked to an underlying asset or index or another property (including one or more securities or indices of securities). Indexed securities may present a high level of risk, and investors in certain indexed securities may lose their entire investment. In addition, the treatment of indexed securities for U.S. federal income tax purposes is often unclear due to the absence of any authority specifically addressing the issues presented by any particular indexed security. Thus, if you propose to invest in indexed securities, you should independently evaluate the federal income tax consequences of purchasing an indexed security that apply in your particular circumstances. You should also read “United States Taxation” below for a discussion of U.S. tax matters.

We May Engage in Hedging Activities that Could Adversely Affect an Indexed Security

In order to hedge an exposure on a particular indexed security, we may, directly or through our affiliates, enter into transactions involving the securities, commodities or currencies or other instruments or measures that underlie the index for that security, or derivative instruments, such as swaps, options or futures, on the index or any of its component items. By engaging in transactions of this kind, we could adversely affect the value of an indexed security. It is possible that we could achieve substantial returns from our hedging transactions while the value of the indexed security may decline.

We May Have Conflicts of Interest Regarding an Indexed Security

GS&Co. and our other affiliates may have conflicts of interest with respect to some indexed securities. GS&Co. and our other affiliates may engage in trading, including trading for hedging purposes, for their own accounts or for other accounts under their management, in indexed securities and in the securities, commodities or currencies or other instruments or measures on which the index is based or in other derivative instruments related to the index or its component items. These trading activities could adversely affect the value of indexed securities. We and our affiliates may also issue or underwrite securities or derivative instruments that are linked to the same index as one or more indexed securities. By introducing competing products into the marketplace in this manner, we could adversely affect the value of an indexed security.

GS&Co. or another of our affiliates may serve as calculation agent for the indexed securities and may have considerable discretion in calculating the amounts payable in respect of the securities. To the extent that GS&Co. or another of our affiliates calculates or compiles a particular index, it may also have considerable discretion in performing the calculation or compilation of the index. Exercising discretion in this manner could adversely affect the value of an indexed security based on the index or the rate of return on the security.

**CONSIDERATIONS RELATING TO SECURITIES DENOMINATED OR PAYABLE
IN OR LINKED TO A NON-U.S. DOLLAR CURRENCY**

If you intend to invest in a non-U.S. dollar security — e.g., a security whose principal and/or interest is payable in a currency other than U.S. dollars or that may be settled by delivery of or reference to a non-U.S. dollar currency or property denominated in or otherwise linked to a non-U.S. dollar currency — you should consult your own financial and legal advisors as to the currency risks entailed by your investment. Securities of this kind may not be an appropriate investment for investors who are unsophisticated with respect to non-U.S. dollar currency transactions.

The information in this prospectus is directed primarily to investors who are U.S. residents. Investors who are not U.S. residents should consult their own financial and legal advisors about currency-related risks particular to their investment.

An Investment in a Non-U.S. Dollar Security Involves Currency-Related Risks

An investment in a non-U.S. dollar security entails significant risks that are not associated with a similar investment in a security that is payable solely in U.S. dollars and where settlement value is not otherwise based on a non-U.S. dollar currency. These risks include the possibility of significant changes in rates of exchange between the U.S. dollar and the various non-U.S. dollar currencies or composite currencies and the possibility of the imposition or modification of foreign exchange controls or other conditions by either the United States or non-U.S. governments. These risks generally depend on factors over which we have no control, such as economic and political events and the supply of and demand for the relevant currencies in the global markets.

Changes in Currency Exchange Rates Can Be Volatile and Unpredictable

Rates of exchange between the U.S. dollar and many other currencies have been highly volatile, and this volatility may continue and perhaps spread to other currencies in the future. Fluctuations in currency exchange rates could adversely affect an investment in a security denominated in, or whose value is otherwise linked to, a specified currency other than U.S. dollars. Depreciation of the specified currency against the U.S. dollar could result in a decrease in the U.S. dollar-equivalent value of payments on the security, including the principal payable at maturity or settlement value payable upon exercise. That in turn could cause the market value of the security to fall. Depreciation of the specified currency against the U.S. dollar could result in a loss to the investor on a U.S. dollar basis.

Exchange rates are the result of the supply of, and the demand for, the relevant currencies. Changes in exchange rates result over time, and may vary considerably during the life of an investment denominated in or otherwise relating to a foreign currency, from the interaction of many factors directly or indirectly affecting economic and political conditions in the country or area of the applicable currency, including economic and political developments in other countries.

Of particular importance to potential currency exchange risk are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments;
- the extent of governmental surpluses or deficits in the relevant countries; and
- other financial, economic, military and political factors.

All of these factors are, in turn, sensitive to the monetary, fiscal and trade policies pursued by the government of the applicable country and other countries important to international trade and finance.

[Table of Contents](#)

It has been reported that the U.K. Financial Conduct Authority and regulators from other countries, including the United States, are in the process of investigating the potential manipulation of published currency exchange rates. If such manipulation has occurred or is continuing, certain published exchange rates may have been, or may be in the future, artificially lower (or higher) than they would otherwise have been. Any such manipulation could have an adverse impact on any payments on, and the value of, an investment in a security denominated in, or whose value is otherwise linked to, a specified currency other than U.S. dollars, including the value of any such investment in the trading markets. In addition, we cannot predict whether any changes or reforms affecting the determination or publication of exchange rates or the supervision of currency trading will be implemented in connection with these investigations. Any such changes or reforms could also adversely impact any such investment.

Government Policy Can Adversely Affect Foreign Currency Exchange Rates and an Investment in a Non-U.S. Dollar Security

Foreign currency exchange rates can either float or be fixed by sovereign governments. From time to time, governments use a variety of techniques, such as intervention by a country’s central bank or imposition of regulatory controls or taxes, to affect the exchange rate of their currencies. Governments may also issue a new currency to replace an existing currency or alter the exchange rate or exchange characteristics by devaluation or revaluation of a currency. Thus, a special risk in purchasing non-U.S. dollar securities is that their yields or payouts could be significantly and unpredictably affected by governmental actions. Even in the absence of governmental action directly affecting currency exchange rates, political or economic developments in the country issuing the specified currency for a non-U.S. dollar security or elsewhere could lead to significant and sudden changes in the exchange rate between the U.S. dollar and the specified currency. These changes could affect the value of the security as participants in the global currency markets move to buy or sell the specified currency or U.S. dollars in reaction to these developments.

Governments have imposed from time to time and may in the future impose exchange controls or other conditions, including taxes, with respect to the exchange or transfer of a specified currency that could affect exchange rates as well as the availability of a specified currency for a security at its maturity or on any other payment date. In addition, the ability of a holder to move currency freely out of the country in which payment in the currency is received or to convert the currency at a freely determined market rate could be limited by governmental actions.

Non-U.S. Dollar Securities May Permit Us to Make Payments in U.S. Dollars or Delay Payment If We Are Unable to Obtain the Specified Currency

Securities payable in a currency other than U.S. dollars may provide that, if the other currency is subject to convertibility, transferability, market disruption or other conditions affecting its availability at or about the time when a payment on the securities comes due because of circumstances beyond our control, we will be entitled to make the payment in U.S. dollars or delay making the payment. These circumstances could include the imposition of exchange controls or our inability to obtain the other currency because of a disruption in the currency markets. If we made payment in U.S. dollars, the exchange rate we would use would be determined in the manner described above under “Description of Debt Securities We May Offer — Payment Mechanics for Debt Securities — How We Will Make Payments Due in Other Currencies — When the Specified Currency Is Not Available”. A determination of this kind may be based on limited information and would involve significant discretion on the part of our exchange rate agent, which may be an affiliate of ours. As a result, the value of the payment in U.S. dollars an investor would receive on the payment date may be less than the value of the payment the investor would have received in the other currency if it had been available, or may be zero. In addition, a government may impose extraordinary taxes on transfers of a currency. If that happens we will be entitled to deduct these taxes from any payment on securities payable in that currency.

[Table of Contents](#)

We Will Not Adjust Non-U.S. Dollar Securities to Compensate for Changes in Foreign Currency Exchange Rates

Except as described above, we will not make any adjustment or change in the terms of a non-U.S. dollar security in the event of any change in foreign currency exchange rates for the relevant currency, whether in the event of any devaluation, revaluation or imposition of exchange or other regulatory controls or taxes or in the event of other developments affecting that currency, the U.S. dollar or any other currency. Consequently, investors in non-U.S. dollar securities will bear the risk that their investment may be adversely affected by these types of events.

In a Lawsuit for Payment on a Non-U.S. Dollar Security, an Investor May Bear Foreign Currency Exchange Risk

Our debt securities, warrants, purchase contracts and units will be governed by New York law. Under Section 27 of the New York Judiciary Law, a state court in the State of New York rendering a judgment on a security denominated in a currency other than U.S. dollars would be required to render the judgment in the specified currency; however, the judgment would be converted into U.S. dollars at the exchange rate prevailing on the date of entry of the judgment. Consequently, in a lawsuit for payment on a security denominated in a currency other than U.S. dollars, investors would bear currency exchange risk until judgment is entered, which could be a long time.

In courts outside of New York, investors may not be able to obtain judgment in a specified currency other than U.S. dollars. For example, a judgment for money in an action based on a non-U.S. dollar security in many other U.S. federal or state courts ordinarily would be enforced in the United States only in U.S. dollars. The date used to determine the rate of conversion of the currency in which any particular security is denominated into U.S. dollars will depend upon various factors, including which court renders the judgment.

Information About Foreign Currency Exchange Rates May Not Be Indicative of Future Performance

If we issue a non-U.S. dollar security, we may include in the applicable prospectus supplement a currency supplement that provides information about historical exchange rates for the relevant non-U.S. dollar currency or currencies. Any information about exchange rates that we may provide will be furnished as a matter of information only, and you should not regard the information as indicative of the range of, or trends in, fluctuations in currency exchange rates that may occur in the future. That rate will likely differ from the exchange rate used under the terms that apply to a particular security.

Determinations Made by the Exchange Rate Agent

All determinations made by the exchange rate agent will be made in its sole discretion (except to the extent expressly provided in this prospectus or in the applicable prospectus supplement that any determination is subject to approval by The Goldman Sachs Group, Inc.). In the absence of manifest error, its determinations will be conclusive for all purposes and will bind all holders and us. The exchange rate agent will not have any liability for its determinations.

UNITED STATES TAXATION

This section describes the material United States federal income tax consequences of owning certain of the debt securities, preferred stock and depositary shares we are offering. The material United States federal income tax consequences of owning the debt securities described below under “— Taxation of Debt Securities — United States Holders — Indexed and Other Debt Securities”, of owning common stock, of owning preferred stock that may be convertible into or exercisable or exchangeable for securities or other property or of owning warrants, purchase contracts and units will be described in the applicable prospectus supplement. This section is the opinion of Sidley Austin LLP and Sullivan & Cromwell LLP, United States tax counsel to The Goldman Sachs Group, Inc. It applies to you only if you hold your securities as capital assets for tax purposes. This section addresses only United States federal income taxation and does not discuss all of the tax consequences that may be relevant to you in light of your individual circumstances, including foreign, state or local tax consequences, and tax consequences arising under the Medicare contribution tax on net investment income or the alternative minimum tax. This section does not apply to you if you are a member of a class of holders subject to special rules, such as:

- a dealer in securities or currencies;
- a trader in securities that elects to use a mark-to-market method of accounting for your securities holdings;
- a bank;
- a life insurance company;
- a thrift institution;
- a regulated investment company;
- an accrual method taxpayer subject to special tax accounting rules as a result of its use of financial statements;
- a tax-exempt organization;
- a person that owns offered securities that are a hedge or that are hedged against interest rate or currency risks;
- a person that purchases or sells the offered securities as part of a wash-sale for tax purposes;
- a person that owns offered securities as part of a straddle or conversion transaction for tax purposes; or
- a United States holder (as defined below) whose functional currency for tax purposes is not the U.S. dollar.

This section is based on the U.S. Internal Revenue Code of 1986, as amended, its legislative history, existing and proposed regulations under the Internal Revenue Code, published rulings and court decisions, all as currently in effect. These laws are subject to change, possibly on a retroactive basis.

If an entity or arrangement that is treated as a partnership for United States federal income tax purposes holds the securities, the United States federal income tax treatment of a partner will generally depend on the status of the partner and the tax treatment of the partnership. A partner in a partnership holding the securities should consult its tax advisor with regard to the United States federal income tax treatment of an investment in the securities.

Please consult your own tax advisor concerning the consequences of owning these securities in your particular circumstances under the Internal Revenue Code and the laws of any other taxing jurisdiction.

Taxation of Debt Securities

This subsection describes the material United States federal income tax consequences of owning, selling and disposing of the debt securities we are offering, other than the debt securities described below under “— United States Holders — Indexed and Other Debt Securities”, which will be described in the applicable prospectus supplement. It deals only with debt securities that are due to mature 30 years or less from the date on which they are issued. The United States federal income tax consequences of owning debt securities that are due to mature more than 30 years from their date of issue will be discussed in the applicable prospectus supplement.

The tax consequences of any particular debt security will depend on its terms, and any particular offering of debt securities may have features or terms that cause the United States federal income tax treatment of the debt securities to differ materially from the discussion below. An applicable prospectus supplement will discuss any material differences from the discussion below.

United States Holders

This subsection describes the tax consequences to a United States holder. You are a United States holder if you are a beneficial owner of a debt security and you are, for United States federal income tax purposes:

- a citizen or resident of the United States;
- a domestic corporation;
- an estate whose income is subject to United States federal income tax regardless of its source; or
- a trust if a United States court can exercise primary supervision over the trust’s administration and one or more United States persons are authorized to control all substantial decisions of the trust.

If you are not a United States holder, this subsection does not apply to you and you should refer to “— Non-United States Holders” below.

Payments of Interest

General

Except as described below in the case of interest on an original issue discount debt security that is not qualified stated interest, each as defined below under “— Original Issue Discount — General”, you will be taxed on any interest on your debt security, whether payable in U.S. dollars or a non-U.S. dollar currency, including a composite currency or basket of currencies other than U.S. dollars, as ordinary income at the time you receive the interest or when it accrues, depending on your method of accounting for tax purposes.

Foreign Currency Debt Securities — Cash Basis Taxpayers

If you are a taxpayer that uses the cash receipts and disbursements method of accounting for tax purposes and you receive an interest payment that is denominated in, or determined by reference to, a non-U.S. dollar currency, you must recognize income equal to the U.S. dollar value of the interest payment, based on the exchange rate in effect on the date of receipt, regardless of whether you actually convert the payment into U.S. dollars.

Table of Contents

Foreign Currency Debt Securities — Accrual Basis Taxpayers

If you are a taxpayer that uses an accrual method of accounting for tax purposes, you may determine the amount of income that you recognize with respect to an interest payment denominated in, or determined by reference to, a non-U.S. dollar currency by using one of two methods. Under the first method, you will determine the amount of income accrued based on the average exchange rate in effect during the interest accrual period or, with respect to an accrual period that spans two taxable years, that part of the period within the taxable year.

If you elect the second method, you would determine the amount of income accrued on the basis of the exchange rate in effect on the last day of the accrual period, or, in the case of an accrual period that spans two taxable years, the exchange rate in effect on the last day of the part of the period within the taxable year. Additionally, under this second method, if you receive a payment of interest within five business days of the last day of your accrual period or taxable year, you may instead translate the interest accrued into U.S. dollars at the exchange rate in effect on the day that you actually receive the interest payment. If you elect the second method, it will apply to all debt instruments that you hold at the beginning of the first taxable year to which the election applies and to all debt instruments that you subsequently acquire. You may not revoke this election without the consent of the Internal Revenue Service.

When you actually receive an interest payment, including a payment attributable to accrued but unpaid interest upon the sale or retirement of your debt security, denominated in, or determined by reference to, a non-U.S. dollar currency for which you accrued an amount of income, you will recognize ordinary income or loss measured by the difference, if any, between the exchange rate that you used to accrue interest income and the exchange rate in effect on the date of receipt, regardless of whether you actually convert the payment into U.S. dollars.

Original Issue Discount

General

If you own a debt security, other than a short-term debt security with a term of one year or less, it will be treated as an original issue discount debt security if the amount by which the debt security's stated redemption price at maturity exceeds its issue price is more than a de minimis amount. Generally, a debt security's issue price will be the first price at which a substantial amount of debt securities included in the issue of which the debt security is a part is sold to persons other than bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents, or wholesalers. A debt security's stated redemption price at maturity is the total of all payments provided by the debt security that are not payments of qualified stated interest. Generally, an interest payment on a debt security is qualified stated interest if it is one of a series of stated interest payments on a debt security that are unconditionally payable at least annually at a single fixed rate, with certain exceptions for lower rates paid during some periods, applied to the outstanding principal amount of the debt security. There are special rules for variable rate debt securities that are discussed below under "— Variable Rate Debt Securities".

In general, your debt security is not an original issue discount debt security if the amount by which its stated redemption price at maturity exceeds its issue price is less than the de minimis amount of 0.25 percent of its stated redemption price at maturity multiplied by the number of complete years to its maturity. Your debt security will have de minimis original issue discount if the amount of the excess is less than the de minimis amount. If your debt security has de minimis original issue discount, you must include the de minimis amount in income as stated principal payments are made on the debt security, unless you make the election described below under "— Election to Treat All Interest as Original Issue

[Table of Contents](#)

Discount”. You can determine the includible amount with respect to each such payment by multiplying the total amount of your debt security’s de minimis original issue discount by a fraction equal to:

- the amount of the principal payment made
divided by:
- the stated principal amount of the debt security.

Generally, if your original issue discount debt security matures more than one year from its date of issue, you must include original issue discount in income before you receive cash attributable to that income. The amount of original issue discount that you must include in income is calculated using a constant-yield method, and generally you will include increasingly greater amounts of original issue discount in income over the life of your debt security. More specifically, you can calculate the amount of original issue discount that you must include in income by adding the daily portions of original issue discount with respect to your original issue discount debt security for each day during the taxable year or portion of the taxable year that you hold your original issue discount debt security. You can determine the daily portion by allocating to each day in any accrual period a pro rata portion of the original issue discount allocable to that accrual period. You may select an accrual period of any length with respect to your original issue discount debt security and you may vary the length of each accrual period over the term of your original issue discount debt security. However, no accrual period may be longer than one year and each scheduled payment of interest or principal on the original issue discount debt security must occur on either the first or final day of an accrual period.

You can determine the amount of original issue discount allocable to an accrual period by:

- multiplying your original issue discount debt security’s adjusted issue price at the beginning of the accrual period by your debt security’s yield to maturity; and then
- subtracting from this figure the sum of the payments of qualified stated interest on your debt security allocable to the accrual period.

You must determine the original issue discount debt security’s yield to maturity on the basis of compounding at the close of each accrual period and adjusting for the length of each accrual period. Further, you determine your original issue discount debt security’s adjusted issue price at the beginning of any accrual period by:

- adding your original issue discount debt security’s issue price and any accrued original issue discount for each prior accrual period; and then
- subtracting any payments previously made on your original issue discount debt security that were not qualified stated interest payments.

If an interval between payments of qualified stated interest on your original issue discount debt security contains more than one accrual period, then, when you determine the amount of original issue discount allocable to an accrual period, you must allocate the amount of qualified stated interest payable at the end of the interval, including any qualified stated interest that is payable on the first day of the accrual period immediately following the interval, pro rata to each accrual period in the interval based on their relative lengths. In addition, you must increase the adjusted issue price at the beginning of each accrual period in the interval by the amount of any qualified stated interest that has accrued prior to the first day of the accrual period but that is not payable until the end of the interval. You may compute the amount of original issue discount allocable to an initial short accrual period by using any reasonable method if all other accrual periods, other than a final short accrual period, are of equal length.

Table of Contents

The amount of original issue discount allocable to the final accrual period is equal to the difference between:

- the amount payable at the maturity of your debt security, other than any payment of qualified stated interest; and
- your debt security’s adjusted issue price as of the beginning of the final accrual period.

Acquisition Premium

If you purchase your debt security for an amount that is less than or equal to the sum of all amounts, other than qualified stated interest, payable on your debt security after the purchase date but is greater than the amount of your debt security’s adjusted issue price, as determined above under “— General”, the excess is acquisition premium. If you do not make the election described below under “— Election to Treat All Interest as Original Issue Discount”, then you must reduce the daily portions of original issue discount by a fraction equal to:

- the excess of your adjusted basis in the debt security immediately after purchase over the adjusted issue price of the debt security
divided by:
- the excess of the sum of all amounts payable, other than qualified stated interest, on the debt security after the purchase date over the debt security’s adjusted issue price.

Pre-Issuance Accrued Interest

An election may be made to decrease the issue price of your debt security by the amount of pre-issuance accrued interest if:

- a portion of the initial purchase price of your debt security is attributable to pre-issuance accrued interest;
- the first stated interest payment on your debt security is to be made within one year of your debt security’s issue date; and
- the payment will equal or exceed the amount of pre-issuance accrued interest.

If this election is made, a portion of the first stated interest payment will be treated as a return of the excluded pre-issuance accrued interest and not as an amount payable on your debt security.

Debt Securities Subject to Contingencies Including Optional Redemption

Your debt security is subject to a contingency if it provides for an alternative payment schedule or schedules applicable upon the occurrence of a contingency or contingencies, other than a remote or incidental contingency, whether such contingency relates to payments of interest or of principal. In such a case, you must determine the yield and maturity of your debt security by assuming that the payments will be made according to the payment schedule most likely to occur if:

- the timing and amounts of the payments that comprise each payment schedule are known as of the issue date; and
- one of such schedules is significantly more likely than not to occur.

If there is no single payment schedule that is significantly more likely than not to occur, other than because of a mandatory sinking fund, you must include income on your debt security in accordance with the general rules that govern contingent payment debt instruments. These rules will be discussed in the applicable prospectus supplement.

Table of Contents

Notwithstanding the general rules for determining yield and maturity, if your debt security is subject to contingencies, and either you or we have an unconditional option or options that, if exercised, would require payments to be made on the debt security under an alternative payment schedule or schedules, then:

- in the case of an option or options that we may exercise, we will be deemed to exercise or not exercise an option or combination of options in the manner that minimizes the yield on your debt security; and
- in the case of an option or options that you may exercise, you will be deemed to exercise or not exercise an option or combination of options in the manner that maximizes the yield on your debt security.

If both you and we hold options described in the preceding sentence, those rules will apply to each option in the order in which they may be exercised. You may determine the yield on your debt security for the purposes of those calculations by using any date on which your debt security may be redeemed or repurchased as the maturity date and the amount payable on the date that you chose in accordance with the terms of your debt security as the principal amount payable at maturity.

If a contingency, including the exercise of an option, actually occurs or does not occur contrary to an assumption made according to the above rules then, except to the extent that a portion of your debt security is repaid as a result of this change in circumstances and solely to determine the amount and accrual of original issue discount, you must redetermine the yield and maturity of your debt security by treating your debt security as having been retired and reissued on the date of the change in circumstances for an amount equal to your debt security's adjusted issue price on that date.

Election to Treat All Interest as Original Issue Discount

You may elect to include in gross income all interest that accrues on your debt security using the constant-yield method described above under “— General”, with the modifications described below. For purposes of this election, interest will include stated interest, original issue discount, de minimis original issue discount, market discount, de minimis market discount and unstated interest, as adjusted by any amortizable bond premium, described below under “— Debt Securities Purchased at a Premium”, or acquisition premium.

If you make this election for your debt security, then, when you apply the constant-yield method:

- the issue price of your debt security will equal your cost;
- the issue date of your debt security will be the date you acquired it; and
- no payments on your debt security will be treated as payments of qualified stated interest.

Generally, this election will apply only to the debt security for which you make it; however, if the debt security has amortizable bond premium, you will be deemed to have made an election to apply amortizable bond premium against interest for all debt instruments with amortizable bond premium, other than debt instruments the interest on which is excludible from gross income, that you hold as of the beginning of the taxable year to which the election applies or thereafter. Additionally, if you make this election for a market discount debt security, as defined below under “— Market Discount”, you will be treated as having made the election discussed below under “— Market Discount” to include market discount in income currently over the life of all debt instruments having market discount that you acquire on or after the first day of the first taxable year to which the election applies. You may not revoke any election to apply the constant-yield method to all interest on a debt security or the deemed elections with respect to amortizable bond premium or market discount debt securities without the consent of the Internal Revenue Service.

Variable Rate Debt Securities

Your debt security will be a variable rate debt security if:

- your debt security’s issue price does not exceed the total non-contingent principal payments by more than the lesser of:
 1. .015 *multiplied* by the *product* of the total non-contingent principal payments and the number of complete years to maturity from the issue date; or
 2. 15 percent of the total non-contingent principal payments; and
- your debt security provides for stated interest, compounded or paid at least annually, only at:
 1. one or more qualified floating rates;
 2. a single fixed rate and one or more qualified floating rates;
 3. a single objective rate; or
 4. a single fixed rate and a single objective rate that is a qualified inverse floating rate; and
- the value of any variable rate on any date during the term of your note is set no earlier than three months prior to the first day on which that value is in effect and no later than one year following that first day.

Your debt security will have a variable rate that is a qualified floating rate if:

- variations in the value of the rate can reasonably be expected to measure contemporaneous variations in the cost of newly borrowed funds in the currency in which your debt security is denominated; or
- the rate is equal to such a rate either:
 1. multiplied by a fixed multiple that is greater than 0.65 but not more than 1.35; or
 2. multiplied by a fixed multiple greater than 0.65 but not more than 1.35, and then increased or decreased by a fixed rate.

If your debt security provides for two or more qualified floating rates that are within 0.25 percentage points of each other on the issue date or can reasonably be expected to have approximately the same values throughout the term of the debt security, the qualified floating rates together constitute a single qualified floating rate.

Your debt security will not have a qualified floating rate, however, if the rate is subject to certain restrictions (including caps, floors, governors, or other similar restrictions) unless such restrictions are fixed throughout the term of the debt security or are not reasonably expected to significantly affect the yield on the debt security.

Your debt security will have a variable rate that is a single objective rate if:

- the rate is not a qualified floating rate; and
- the rate is determined using a single, fixed formula that is based on objective financial or economic information that is not within the control of or unique to the circumstances of the issuer or a related party.

Your debt security will not have a variable rate that is an objective rate, however, if it is reasonably expected that the average value of the rate during the first half of your debt security’s term will be either significantly less than or significantly greater than the average value of the rate during the final half of your debt security’s term.

Table of Contents

An objective rate as described above is a qualified inverse floating rate if:

- the rate is equal to a fixed rate minus a qualified floating rate; and
- the variations in the rate can reasonably be expected to inversely reflect contemporaneous variations in the cost of newly borrowed funds.

Your debt security will also have a single qualified floating rate or an objective rate if interest on your debt security is stated at a fixed rate for an initial period of one year or less followed by either a qualified floating rate or an objective rate for a subsequent period, and either:

- the fixed rate and the qualified floating rate or objective rate have values on the issue date of the debt security that do not differ by more than 0.25 percentage points; or
- the value of the qualified floating rate or objective rate is intended to approximate the fixed rate.

In general, if your variable rate debt security provides for stated interest at a single qualified floating rate or objective rate, or one of those rates after a single fixed rate for an initial period of one year or less meeting one of the two requirements described above, all stated interest on your debt security is qualified stated interest. In this case, the amount of original issue discount, if any, is determined by using, in the case of a qualified floating rate or qualified inverse floating rate, the value as of the issue date of the qualified floating rate or qualified inverse floating rate, or, for any other objective rate, a fixed rate that reflects the yield reasonably expected for your debt security.

If your variable rate debt security does not provide for stated interest at a single qualified floating rate or a single objective rate, and also does not provide for interest payable at a fixed rate other than a single fixed rate for an initial period of one year or less meeting one of the two requirements described above, you generally must determine the interest and original issue discount accruals on your debt security by:

- determining a fixed rate substitute for each variable rate provided under your variable rate debt security;
- constructing the equivalent fixed rate debt instrument, using the fixed rate substitute described above;
- determining the amount of qualified stated interest and original issue discount with respect to the equivalent fixed rate debt instrument; and
- adjusting for actual variable rates during the applicable accrual period.

When you determine the fixed rate substitute for each variable rate provided under the variable rate debt security, you generally will use the value of each variable rate as of the issue date or, for an objective rate that is not a qualified inverse floating rate, a rate that reflects the reasonably expected yield on your debt security.

If your variable rate debt security provides for stated interest either at one or more qualified floating rates or at a qualified inverse floating rate, and also provides for stated interest at a single fixed rate other than at a single fixed rate for an initial period of one year or less meeting one of the two requirements described above, you generally must determine interest and original issue discount accruals by using the method described in the previous paragraph. However, your variable rate debt security will be treated, for purposes of the first three steps of the determination, as if your debt security had provided for a qualified floating rate, or a qualified inverse floating rate, rather than the fixed rate. The qualified floating rate, or qualified inverse floating rate, that replaces the fixed rate must be such that the fair market value of your variable rate debt security as of the issue date approximates the fair market value of an otherwise identical debt instrument that provides for the qualified floating rate, or qualified inverse floating rate, rather than the fixed rate.

Short-Term Debt Securities

In general, if you are an individual or other cash basis United States holder of a debt security with a fixed maturity of one year or less, a short-term debt security, you are not required to accrue original issue discount, as specially defined below for the purposes of this paragraph, for United States federal income tax purposes unless you elect to do so (although it is possible that you may be required to include any stated interest in income as you receive it). If you are an accrual basis taxpayer, a taxpayer in a special class, including, but not limited to, a regulated investment company, common trust fund, or a certain type of pass-through entity, or a cash basis taxpayer who so elects, you will be required to accrue original issue discount on short-term debt securities on either a straight-line basis or under the constant-yield method, based on daily compounding. If you are not required and do not elect to include original issue discount in income currently, any gain you realize on the sale or retirement of your short-term debt security will be ordinary income to the extent of the accrued original issue discount, which will be determined on a straight-line basis unless you make an election to accrue the original issue discount under the constant-yield method, through the date of sale or retirement. However, if you are not required and do not elect to accrue original issue discount on your short-term debt securities, you will be required to defer deductions for interest on borrowings allocable to your short-term debt securities in an amount not exceeding the deferred income until the deferred income is realized.

When you determine the amount of original issue discount subject to these rules, you must include all interest payments on your short-term debt security, including stated interest, in your short-term debt security's stated redemption price at maturity.

Non-U.S. Dollar Currency Original Issue Discount Debt Securities

If your original issue discount debt security is denominated in, or determined by reference to, a non-U.S. dollar currency, you must determine original issue discount for any accrual period on your original issue discount debt security in the non-U.S. dollar currency and then translate the amount of original issue discount into U.S. dollars in the same manner as stated interest accrued by an accrual basis United States holder, as described above under "— Taxation of Debt Securities — United States Holders — Payments of Interest". You may recognize ordinary income or loss when you receive an amount attributable to original issue discount in connection with a payment of interest or the sale or retirement of your debt security.

Market Discount

You will be treated as if you purchased your debt security, other than a short-term debt security, at a market discount, and your debt security will be a market discount debt security if the difference between the debt security's stated redemption price at maturity or, in the case of an original issue discount debt security, the debt security's revised issue price, and the price you paid for your debt security is equal to or greater than 0.25 percent of your debt security's stated redemption price at maturity *multiplied* by the number of complete years to the debt security's maturity. To determine the revised issue price of your debt security for these purposes, you generally add any original issue discount that has accrued on your debt security to its issue price.

If your debt security's stated redemption price at maturity or, in the case of a discount debt security, its revised issue price, exceeds the price you paid for the debt security by less than 0.25 percent of the debt security's stated redemption price at maturity *multiplied* by the number of complete years to the debt security's maturity, the excess constitutes de minimis market discount, and the rules discussed below are not applicable to you.

You must treat any gain you recognize on the maturity or disposition of your market discount debt security as ordinary income to the extent of the accrued market discount on your debt security.

Table of Contents

Alternatively, you may elect to include market discount in income currently over the life of your debt security. If you make this election, it will apply to all debt instruments with market discount that you acquire on or after the first day of the first taxable year to which the election applies. You may not revoke this election without the consent of the Internal Revenue Service. If you own a market discount debt security and do not make this election, you will generally be required to defer deductions for interest on borrowings allocable to your debt security in an amount not exceeding the accrued market discount on your debt security until the maturity or disposition of your debt security.

If you own a market discount debt security, the market discount would accrue on a straight-line basis unless an election is made to accrue market discount using a constant-yield method. If you make this election, it will apply only to the debt security with respect to which it is made and you may not revoke it. You will, however, not include accrued market discount in income unless you elect to do so as described above.

Debt Securities Purchased at a Premium

If you purchase your debt security for an amount in excess of its principal amount (or, in the case of an original issue discount debt security, in excess of the sum of all amounts payable on the debt security after the acquisition date (other than payments of qualified stated interest)), you may elect to treat the excess as amortizable bond premium. If you make this election, you will reduce the amount required to be included in your income each accrual period with respect to interest on your debt security by the amount of amortizable bond premium allocable to that accrual period, based on your debt security's yield to maturity. If the amortizable bond premium allocable to an accrual period exceeds your interest income from the debt securities for such accrual period, such excess is first allowed as a deduction to the extent of interest included in your income in respect of the debt securities in previous accrual periods and is then carried forward to your next accrual period. If the amortizable bond premium allocable and carried forward to the accrual period in which the debt securities are sold, retired or otherwise disposed of exceeds your interest income for such accrual period, you would be allowed an ordinary deduction equal to such excess. If your debt security is denominated in, or determined by reference to, a non-U.S. dollar currency, you will compute your amortizable bond premium in units of the non-U.S. dollar currency and your amortizable bond premium will reduce your interest income in units of the non-U.S. dollar currency. Gain or loss recognized that is attributable to changes in foreign currency exchange rates between the time your amortized bond premium offsets interest income and the time of the acquisition of your debt security is generally taxable as ordinary income or loss. If you make an election to amortize bond premium, it will apply to all debt instruments, other than debt instruments the interest on which is excludible from gross income, that you hold at the beginning of the first taxable year to which the election applies or that you thereafter acquire, and you may not revoke it without the consent of the Internal Revenue Service. See also "— Taxation of Debt Securities — United States Holders — Original Issue Discount — Election to Treat All Interest as Original Issue Discount".

Purchase, Sale and Retirement of the Debt Securities

- Your tax basis in your debt security will generally be the U.S. dollar cost, as defined below, of your debt security, adjusted by:
- adding any original issue discount, market discount, de minimis original issue discount and de minimis market discount previously included in income with respect to your debt security; and then
 - subtracting any payments on your debt security that are not qualified stated interest payments and any amortizable bond premium to the extent that such premium either reduced interest income on your debt security or gave rise to a deduction on your debt security.

Table of Contents

If you purchase your debt security with non-U.S. dollar currency, the U.S. dollar cost of your debt security will generally be the U.S. dollar value of the purchase price on the date of purchase. However, if you are a cash basis taxpayer, or an accrual basis taxpayer if you so elect, and your debt security is traded on an established securities market, as defined in the applicable U.S. Treasury regulations, the U.S. dollar cost of your debt security will be the U.S. dollar value of the purchase price on the settlement date of your purchase.

You will generally recognize gain or loss on the sale or retirement of your debt security equal to the difference between the amount you realize on the sale or retirement, excluding any amounts attributable to accrued but unpaid interest (which will be treated as interest payments), and your tax basis in your debt security. If your debt security is sold or retired for an amount in non-U.S. dollar currency, the amount you realize will be the U.S. dollar value of such amount on the date the note is disposed of or retired, except that in the case of a note that is traded on an established securities market, as defined in the applicable U.S. Treasury regulations, a cash basis taxpayer, or an accrual basis taxpayer that so elects, will determine the amount realized based on the U.S. dollar value of the specified currency on the settlement date of the sale.

You will recognize capital gain or loss when you sell or retire your debt security, except to the extent:

- described above under “— Taxation of Debt Securities — United States Holders — Short-Term Debt Securities” or “— Market Discount”; or
- attributable to changes in exchange rates as described below.

Capital gain of a non-corporate United States holder is generally taxed at preferential rates where the property is held for more than one year.

You must treat any portion of the gain or loss that you recognize on the sale or retirement of a debt security as ordinary income or loss to the extent attributable to changes in exchange rates. However, you take exchange gain or loss into account only to the extent of the total gain or loss you realize on the transaction.

Exchange of Amounts in Other Than U.S. Dollars

If you receive non-U.S. dollar currency as interest on your debt security or on the sale or retirement of your debt security, your tax basis in the non-U.S. dollar currency will equal its U.S. dollar value when the interest is received or at the time of the sale or retirement. If you purchase non-U.S. dollar currency, you generally will have a tax basis equal to the U.S. dollar value of the non-U.S. dollar currency on the date of your purchase. If you sell or dispose of a non-U.S. dollar currency, including if you use it to purchase debt securities or exchange it for U.S. dollars, any gain or loss recognized generally will be ordinary income or loss.

Indexed and Other Debt Securities

The applicable prospectus supplement will discuss the material United States federal income tax rules with respect to contingent non-U.S. dollar currency debt securities, debt securities that may be convertible into or exercisable or exchangeable for common or preferred stock or other securities of Goldman Sachs or debt or equity securities of one or more third parties, indexed debt securities (as described above under “Description of Debt Securities We May Offer — Indexed Debt Securities”), debt securities that are subject to the rules governing contingent payment debt instruments, renewable or extendible debt securities and any debt securities providing for the periodic payment of principal over the life of the debt security.

Non-United States Holders

This subsection describes the tax consequences to a non-United States holder. You are a non-United States holder if you are the beneficial owner of a debt security and are, for United States federal income tax purposes:

- a nonresident alien individual;
- a foreign corporation; or
- an estate or trust that in either case is not subject to United States federal income tax on a net income basis on income or gain from a debt security.

If you are a United States holder, this subsection does not apply to you.

This discussion assumes that the debt security is not subject to the rules of Section 871(h)(4)(A) of the Internal Revenue Code, relating to interest payments that are determined by reference to the income, profits, changes in the value of property or other attributes of the debtor or a related party. If this assumption is incorrect with respect to a particular debt security, the applicable prospectus supplement will discuss the material United States federal income tax consequences to a non-United States holder that holds such a debt security.

In addition, the discussion herein does not address the tax treatment of a debt security that is linked to the performance of a U.S. equity or an index or a basket that includes a U.S. equity. The applicable prospectus supplement will discuss the material United States federal income tax consequences to a non-United States holder that holds such a debt security.

Under United States federal income and estate tax law, and subject to the discussion of backup withholding and foreign account tax compliance below, if you are a non-United States holder of a debt security:

- we and other U.S. payors generally will not be required to deduct United States withholding tax from payments of principal, premium, if any, and interest, including original issue discount, to you if, in the case of payments of interest:
 1. you do not actually or constructively own 10% or more of the total combined voting power of all classes of our stock entitled to vote;
 2. you are not a controlled foreign corporation that is related to us through stock ownership;
 3. you are not a bank receiving interest on an extension of credit made pursuant to a loan agreement entered into in the ordinary course of your trade or business; and
 4. either:
 - a. you have furnished to the U.S. payor an Internal Revenue Service Form W-8BEN or W-8BEN-E or an acceptable substitute form upon which you certify, under penalties of perjury, that you are not a United States person;
 - b. in the case of payments made outside the United States to you at an offshore account (generally, an account maintained by you at a bank or other financial institution at any location outside the United States), you have furnished to the U.S. payor documentation that establishes your identity and your status as the beneficial owner of the payment for United States federal income tax purposes and as a person who is not a United States person;

- c. the U.S. payor has received a withholding certificate (furnished on an appropriate Internal Revenue Service Form W-8 or an acceptable substitute form) from a person claiming to be:
 - i. a withholding foreign partnership (generally a foreign partnership that has entered into an agreement with the Internal Revenue Service to assume primary withholding responsibility with respect to distributions and guaranteed payments it makes to its partners);
 - ii. a qualified intermediary (generally a non-United States financial institution or clearing organization or a non-United States branch or office of a United States financial institution or clearing organization that is a party to a withholding agreement with the Internal Revenue Service); or
 - iii. a U.S. branch of a non-United States bank or of a non-United States insurance company; and

the withholding foreign partnership, qualified intermediary or U.S. branch has received documentation upon which it may rely to treat the payment as made to a person who is not a United States person that is, for United States federal income tax purposes, the beneficial owner of the payments on the debt securities in accordance with U.S. Treasury regulations (or, in the case of a qualified intermediary, in accordance with its agreement with the Internal Revenue Service);
 - d. the U.S. payor receives a statement from a securities clearing organization, bank or other financial institution that holds customers' securities in the ordinary course of its trade or business:
 - i. certifying to the U.S. payor under penalties of perjury that an Internal Revenue Service Form W-8BEN or W-8BEN-E or an acceptable substitute form has been received from you by it or by a similar financial institution between it and you; and
 - ii. to which is attached a copy of the Internal Revenue Service Form W-8BEN or W-8BEN-E or acceptable substitute form; or
 - e. the U.S. payor otherwise possesses documentation upon which it may rely to treat the payment as made to a person who is not a United States person that is, for United States federal income tax purposes, the beneficial owner of the payments on the debt securities in accordance with U.S. Treasury regulations; and
- no deduction for any United States federal withholding tax will be made from any gain that you realize on the sale or exchange of your debt security.

Further, a debt security held by an individual who at death is not a citizen or resident of the United States will not be includible in the individual's gross estate for United States federal estate tax purposes if:

- the decedent did not actually or constructively own 10% or more of the total combined voting power of all classes of our stock entitled to vote at the time of death; and
- the income on the debt security would not have been effectively connected with a U.S. trade or business of the decedent at the same time.

U.S. Treasury Regulations Requiring Disclosure of Reportable Transactions

U.S. Treasury regulations require United States taxpayers to report certain transactions that give rise to a loss in excess of certain thresholds (a “Reportable Transaction”). Under these regulations, if the debt securities are denominated in a foreign currency, a United States holder (or a non-United States holder that holds the debt securities in connection with a U.S. trade or business) that recognizes a loss with respect to the debt securities that is characterized as an ordinary loss due to changes in currency exchange rates (under any of the rules discussed above) would be required to report the loss on Internal Revenue Service Form 8886 (Reportable Transaction Statement) if the loss exceeds the thresholds set forth in the regulations. For individuals and trusts, this loss threshold is \$50,000 in any single taxable year. For other types of taxpayers and other types of losses, the thresholds are higher. You should consult with your tax advisor regarding any tax filing and reporting obligations that may apply in connection with acquiring, owning and disposing of debt securities.

Backup Withholding and Information Reporting

United States Holders

In general, if you are a noncorporate United States holder, we and other payors are required to report to the Internal Revenue Service all payments of principal, any premium and interest on your debt security, and the accrual of original issue discount on an original issue discount debt security. In addition, we and other payors are required to report to the Internal Revenue Service any payment of proceeds of the sale of your debt security before maturity within the United States. Additionally, backup withholding will apply to any payments, including payments of original issue discount, if you fail to provide an accurate taxpayer identification number, or (in the case of interest payments) you are notified by the Internal Revenue Service that you have failed to report all interest and dividends required to be shown on your federal income tax returns.

You generally may obtain a refund of any amounts withheld under the U.S. backup withholding rules that exceed your income tax liability by filing a refund claim with the Internal Revenue Service.

Non-United States Holders

In general, if you are a non-United States holder, payments of principal, premium or interest, including original issue discount, made by us and other payors to you will not be subject to backup withholding and information reporting, provided that the certification requirements described above under “— Taxation of Debt Securities — Non-United States Holders” are satisfied or you otherwise establish an exemption. However, we and other payors are required to report payments of interest on your debt securities, including original issue discount, on Internal Revenue Service Form 1042-S even if the payments are not otherwise subject to information reporting requirements. In addition, payment of the proceeds from the sale of debt securities effected at a United States office of a broker will not be subject to backup withholding and information reporting if you have furnished to the payor or broker an appropriate Internal Revenue Service Form W-8, an acceptable substitute form or other documentation upon which it may rely to treat the payment as made to a non-United States person.

In general, payment of the proceeds from the sale of debt securities effected at a foreign office of a broker will not be subject to information reporting or backup withholding. However, a sale effected at a foreign office of a broker could be subject to information reporting in the same manner as a sale within the United States (and in certain cases may be subject to backup withholding as well) if (i) the broker has certain connections to the United States, (ii) the proceeds or confirmation are sent to the United States or (iii) the sale has certain other specified connections with the United States.

You generally may obtain a refund of any amounts withheld under the backup withholding rules that exceed your income tax liability by filing a refund claim with the Internal Revenue Service.

Foreign Account Tax Compliance Act (FATCA) Withholding

A U.S. law enacted in 2010 (commonly known as “FATCA”) could impose a withholding tax of 30% on interest income (including original issue discount) and other periodic payments on debt securities paid to you or any non-U.S. person or entity that receives such income (a “non-U.S. payee”) on your behalf, unless you and each such non-U.S. payee in the payment chain comply with the applicable information reporting, account identification, withholding, certification and other FATCA-related requirements. In the case of a payee that is a non-U.S. financial institution (for example, a clearing system, custodian, nominee or broker), withholding generally will not be imposed if the financial institution complies with the requirements imposed by FATCA to collect and report (to the U.S. or another relevant taxing authority) substantial information regarding such institution’s U.S. account holders (which would include some account holders that are non-U.S. entities but have U.S. owners). Other payees, including individuals, may be required to provide proof of tax residence or waivers of confidentiality laws and/or, in the case of non-U.S. entities, certification or information relating to their U.S. ownership.

Withholding may be imposed at any point in a chain of payments if the payee is not compliant. A chain may work as follows, for example: The payment is transferred through a paying agent to a clearing system, the clearing system makes a payment to each of the clearing system’s participants, and finally the clearing system participant makes a payment to a non-U.S. bank or broker through which you hold the debt securities, who credits the payment to your account. Accordingly, if you receive payments through a chain that includes one or more non-U.S. payees, such as a non-U.S. bank or broker, the payment could be subject to withholding if, for example, your non-U.S. bank or broker through which you hold the debt securities fails to comply with the FATCA requirements and is subject to withholding. This would be the case even if you would not otherwise have been directly subject to withholding.

A number of countries have entered into, and other countries are expected to enter into, agreements with the U.S. to facilitate the type of information reporting required under FATCA. While the existence of such agreements will not eliminate the risk that debt securities will be subject to the withholding described above, these agreements are expected to reduce the risk of the withholding for investors in (or investors that indirectly hold debt securities through financial institutions in) those countries.

The withholding tax described above could apply to all interest, including original issue discount, and other periodic payments on the debt securities. We will not pay any additional amounts in respect of this withholding tax, so if this withholding applies, you will receive less than the amount that you would have otherwise received.

Depending on your circumstances, you may be entitled to a refund or credit in respect of some or all of this withholding. However, even if you are entitled to have any such withholding refunded, the required procedures could be cumbersome and significantly delay your receipt of any withheld amounts. You should consult your own tax advisors regarding FATCA. You should also consult your bank or broker through which you would hold the debt securities about the likelihood that payments to it (for credit to you) may become subject to withholding in the payment chain.

In addition, your debt securities may also be subject to other U.S. withholding tax as described herein.

Taxation of Preferred Stock and Depositary Shares

This subsection describes the material United States federal income tax consequences of owning, selling and disposing of the preferred stock and depositary shares that we may offer other than

Table of Contents

preferred stock that may be convertible into or exercisable or exchangeable for securities or other property, which will be described in the applicable prospectus supplement. When we refer to preferred stock in this subsection, we mean both preferred stock and depositary shares.

United States Holders

This subsection describes the tax consequences to a United States holder. You are a United States holder if you are a beneficial owner of a share of preferred stock and you are:

- a citizen or resident of the United States;
- a domestic corporation;
- an estate whose income is subject to United States federal income tax regardless of its source; or
- a trust if a United States court can exercise primary supervision over the trust’s administration and one or more United States persons are authorized to control all substantial decisions of the trust.

If you are not a United States holder, this subsection does not apply to you and you should refer to “— Non-United States Holders” below.

Distributions on Preferred Stock

You will be taxed on distributions on preferred stock as dividend income to the extent paid out of our current or accumulated earnings and profits for United States federal income tax purposes. If you are a non-corporate United States holder, dividends paid to you will generally be “qualified dividends” that are taxable to you at a maximum preferential rate of 20%, provided that you hold your shares of preferred stock for more than 60 days during the 121-day period beginning 60 days before the ex-dividend date (or, if the dividend is attributable to a period or periods aggregating over 366 days, provided that you hold your shares of preferred stock for more than 90 days during the 181-day period beginning 90 days before the ex-dividend date) and meet other holding periods requirements. If you are taxed as a corporation, except as described in the next subsection, dividends would be eligible for the 50% dividends-received deduction.

You generally will not be taxed on any portion of a distribution not paid out of our current or accumulated earnings and profits if your tax basis in the preferred stock is greater than or equal to the amount of the distribution. However, you would be required to reduce your tax basis (but not below zero) in the preferred stock by the amount of the distribution, and would recognize capital gain to the extent that the distribution exceeds your tax basis in the preferred stock. Further, if you are a corporation, you would not be entitled to a dividends-received deduction on this portion of a distribution.

Limitations on Dividends-Received Deduction

Corporate shareholders may not be entitled to take the 50% dividends-received deduction in all circumstances. Prospective corporate investors in preferred stock should consider the effect of:

- Section 246A of the Internal Revenue Code, which reduces the dividends-received deduction allowed to a corporate shareholder that has incurred indebtedness that is “directly attributable” to an investment in portfolio stock such as preferred stock;
- Section 246(c) of the Internal Revenue Code, which, among other things, disallows the dividends-received deduction in respect of any dividend on a share of stock that is held for

Table of Contents

less than the minimum holding period (generally at least 46 days during the 90-day period beginning on the date which is 45 days before the date on which such share becomes ex-dividend with respect to such dividend (or, if the dividend is attributable to a period or periods aggregating over 366 days, at least 91 days during the 180-day period beginning on the date which is 90 days before the date on which such share becomes ex-dividend with respect to such dividend)); and

- Section 1059 of the Internal Revenue Code, which, under certain circumstances (including situations where preferred stock is issued at a premium), reduces the basis of stock for purposes of calculating gain or loss in a subsequent disposition by the portion of any “extraordinary dividend” (as defined below) that is eligible for the dividends-received deduction.

Extraordinary Dividends

If you are a corporate shareholder, you will be required to reduce your tax basis (but not below zero) in the preferred stock by the non-taxed portion of any “extraordinary dividend” if you have not held your stock for more than two years before the earliest of the date such dividend is declared, announced, or agreed. Generally, the non-taxed portion of an extraordinary dividend is the amount excluded from income by operation of the dividends-received deduction. An extraordinary dividend on the preferred stock generally would be a dividend that:

- equals or exceeds 5% of the corporate shareholder’s adjusted tax basis in the preferred stock, treating all dividends having ex-dividend dates within an 85 day period as one dividend; or
- exceeds 20% of the corporate shareholder’s adjusted tax basis in the preferred stock, treating all dividends having ex-dividend dates within a 365 day period as one dividend.

In determining whether a dividend paid on the preferred stock is an extraordinary dividend, a corporate shareholder may elect to substitute the fair market value of the stock for its tax basis for purposes of applying these tests if the fair market value as of the day before the ex-dividend date is established to the satisfaction of the Secretary of the Treasury. An extraordinary dividend also includes any amount treated as a dividend in the case of a redemption that is either non-pro rata as to all stockholders or in partial liquidation of the company, regardless of the stockholder’s holding period and regardless of the size of the dividend. Any part of the non-taxed portion of an extraordinary dividend that is not applied to reduce the corporate shareholder’s tax basis as a result of the limitation on reducing its basis below zero would be treated as capital gain and would be recognized in the taxable year in which the extraordinary dividend is received.

If you are a corporate shareholder, please consult your tax advisor with respect to the possible application of the extraordinary dividend provisions of the federal income tax law to your ownership or disposition of preferred stock in your particular circumstances.

Redemption Premium

If we may redeem your preferred stock at a redemption price in excess of its issue price, the entire amount of the excess may constitute an unreasonable redemption premium which will be treated as a constructive dividend. You generally must take this constructive dividend into account each year in the same manner as original issue discount would be taken into account if the preferred stock were treated as an original issue discount debt security for United States federal income tax purposes. See “— Taxation of Debt Securities — United States Holders — Original Issue Discount — General” above for a discussion of the special tax rules for original issue discount. A corporate shareholder would be

Table of Contents

entitled to a dividends-received deduction for any constructive dividends unless the special rules denying a dividends-received deduction described above in “— Limitations on Dividends-Received Deduction” apply. A corporate shareholder would also be required to take these constructive dividends into account when applying the extraordinary dividend rules described above. Thus, a corporate shareholder’s receipt of a constructive dividend may cause some or all stated dividends to be treated as extraordinary dividends. The applicable prospectus supplement for preferred stock that is redeemable at a price in excess of its issue price will indicate whether tax counsel believes that a shareholder must include any redemption premium in income.

Sale or Exchange of Preferred Stock Other Than by Redemption

If you sell or otherwise dispose of your preferred stock (other than by redemption), you will generally recognize capital gain or loss equal to the difference between the amount realized upon the disposition and your adjusted tax basis of the preferred stock. Capital gain of a non-corporate United States holder is generally taxed at preferential rates where the property is held for more than one year.

Redemption of Preferred Stock

If we are permitted to and redeem your preferred stock, it generally would be a taxable event. You would be treated as if you had sold your preferred stock if the redemption:

- results in a complete termination of your stock interest in us;
- is substantially disproportionate with respect to you; or
- is not essentially equivalent to a dividend with respect to you.

In determining whether any of these tests has been met, under certain circumstances, shares of stock considered to be owned by you by reason of certain constructive ownership rules set forth in Section 318 of the Internal Revenue Code, as well as shares actually owned, must be taken into account.

If we redeem your preferred stock in a redemption that meets one of the tests described above, you generally would recognize taxable gain or loss equal to the sum of the amount of cash and fair market value of property (other than stock of us or a successor to us) received by you less your tax basis in the preferred stock redeemed. This gain or loss would be long-term capital gain or capital loss if you have held the preferred stock for more than one year.

If a redemption does not meet any of the tests described above, you generally would be taxed on the cash and fair market value of the property you receive as a dividend to the extent paid out of our current and accumulated earnings and profits. Any amount in excess of our current or accumulated earnings and profits would first reduce your tax basis in the preferred stock and thereafter would be treated as capital gain. If a redemption of the preferred stock is treated as a distribution that is taxable as a dividend, your basis in the redeemed preferred stock would be transferred to the remaining shares of our stock that you own, if any.

Special rules apply if we redeem preferred stock for our debt securities. We will discuss these rules in an applicable prospectus supplement if we have the option to redeem your preferred stock for our debt securities.

Non-United States Holders

This section summarizes certain United States federal income and estate tax consequences of the ownership and disposition of preferred stock by a non-United States holder. You are a non-United States holder if you are, for United States federal income tax purposes:

- a nonresident alien individual;

Table of Contents

- a foreign corporation; or
- an estate or trust that in either case is not subject to United States federal income tax on a net income basis on income or gain from preferred stock.

Dividends

Except as described below, if you are a non-United States holder of preferred stock, dividends paid to you are subject to withholding of United States federal income tax at a 30% rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate. Even if you are eligible for a lower treaty rate, we and other payors will generally be required to withhold at a 30% rate (rather than the lower treaty rate) on dividend payments to you, unless you have furnished to us or another payor:

- a valid Internal Revenue Service Form W-8BEN or W-8BEN-E or an acceptable substitute form upon which you certify, under penalties of perjury, your status as a person who is not a United States person and your entitlement to the lower treaty rate with respect to such payments; or
- in the case of payments made outside the United States to an offshore account (generally, an account maintained by you at an office or branch of a bank or other financial institution at any location outside the United States), other documentary evidence establishing your entitlement to the lower treaty rate in accordance with U.S. Treasury regulations.

If you are eligible for a reduced rate of United States withholding tax under a tax treaty, you may obtain a refund of any amounts withheld in excess of that rate by filing a refund claim with the Internal Revenue Service.

If dividends paid to you are “effectively connected” with your conduct of a trade or business within the United States, and, if required by a tax treaty, the dividends are attributable to a permanent establishment that you maintain in the United States, we and other payors generally are not required to withhold tax from the dividends, provided that you have furnished to us or another payor a valid Internal Revenue Service Form W-8ECI or an acceptable substitute form upon which you represent, under penalties of perjury, that:

- you are not a United States person; and
- the dividends are effectively connected with your conduct of a trade or business within the United States and are includible in your gross income.

“Effectively connected” dividends are taxed at rates applicable to United States citizens, resident aliens and domestic United States corporations.

If you are a corporate non-United States holder, “effectively connected” dividends that you receive may, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate.

Gain on Disposition of Preferred Stock

If you are a non-United States holder, you generally will not be subject to United States federal income tax on gain that you recognize on a disposition of preferred stock unless:

- the gain is “effectively connected” with your conduct of a trade or business in the United States, and the gain is attributable to a permanent establishment that you maintain in the United States, if that is required by an applicable income tax treaty as a condition for subjecting you to United States taxation on a net income basis;

Table of Contents

- you are an individual, you hold the preferred stock as a capital asset, you are present in the United States for 183 or more days in the taxable year of the sale and certain other conditions exist; or
- we are or have been a United States real property holding corporation for federal income tax purposes and you held, directly or indirectly, at any time during the five-year period ending on the date of disposition, more than 5% of your class of preferred stock and you are not eligible for any treaty exemption.

If you are a corporate non-United States holder, “effectively connected” gains that you recognize may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate.

We have not been, are not and do not anticipate becoming a United States real property holding corporation for United States federal income tax purposes.

Federal Estate Taxes

Preferred stock held by a non-United States holder at the time of death will be included in the holder’s gross estate for United States federal estate tax purposes, unless an applicable estate tax treaty provides otherwise.

Backup Withholding and Information Reporting

United States Holders

In general, if you are a noncorporate United States holder, information reporting requirements, on Internal Revenue Service Form 1099, will apply to dividend payments or other taxable distributions made to you, and the payment of proceeds to you from the sale of preferred stock effected at a U.S. office of a broker. Additionally, backup withholding may apply to such payments if you fail to comply with applicable certification requirements or (in the case of dividend payments) are notified by the Internal Revenue Service that you have failed to report all interest and dividends required to be shown on your federal income tax returns.

You generally may obtain a refund of any amounts withheld under the backup withholding rules that exceed your income tax liability by filing a refund claim with the Internal Revenue Service.

Non-United States Holders

If you are a non-United States holder, we and other payors are required to report payments of dividends on Internal Revenue Service Form 1042-S even if the payments are exempt from withholding. You are otherwise generally exempt from backup withholding and information reporting requirements with respect to dividend payments and the payment of the proceeds from the sale of preferred stock effected at a United States office of a broker provided that either (i) the payor or broker does not have actual knowledge or reason to know that you are a United States person and you have furnished a valid Internal Revenue Service Form W-8 or other documentation upon which the payor or broker may rely to treat the payments as made to a non-United States person, or (ii) you otherwise establish an exemption.

Payment of the proceeds from the sale of preferred stock effected at a foreign office of a broker generally will not be subject to information reporting or backup withholding. However, a sale effected at a foreign office of a broker could be subject to information reporting in the same manner as a sale within the United States (and in certain cases may be subject to backup withholding as well) if (i) the broker has certain connections to the United States, (ii) the proceeds or confirmation are sent to the United States or (iii) the sale has certain other specified connections with the United States.

[Table of Contents](#)

You generally may obtain a refund of any amounts withheld under the backup withholding rules that exceed your income tax liability by filing a refund claim with the Internal Revenue Service.

Foreign Account Tax Compliance Act (FATCA) Withholding

A U.S. law enacted in 2010 (commonly known as “FATCA”) could impose a withholding tax of 30% on dividend income and other periodic payments on the preferred stock paid to you or any non-U.S. person or entity that receives such income (a “non-U.S. payee”) on your behalf, unless you and each such non-U.S. payee in the payment chain comply with the applicable information reporting, account identification, withholding, certification and other FATCA-related requirements. In the case of a payee that is a non-U.S. financial institution (for example, a clearing system, custodian, nominee or broker), withholding generally will not be imposed if the financial institution complies with the requirements imposed by FATCA to collect and report (to the U.S. or another relevant taxing authority) substantial information regarding such institution’s U.S. account holders (which would include some account holders that are non-U.S. entities but have U.S. owners). Other payees, including individuals, may be required to provide proof of tax residence or waivers of confidentiality laws and/or, in the case of non-U.S. entities, certification or information relating to their U.S. ownership.

Withholding may be imposed at any point in a chain of payments if the payee is not compliant. A chain may work as follows, for example: The payment is transferred through a paying agent to a clearing system, the clearing system makes a payment to each of the clearing system’s participants, and finally the clearing system participant makes a payment to a non-U.S. bank or broker through which you hold the preferred stock, who credits the payment to your account. Accordingly, if you receive payments through a chain that includes one or more non-U.S. payees, such as a non-U.S. bank or broker, the payment could be subject to withholding if, for example, your non-U.S. bank or broker through which you hold the preferred stock fails to comply with the FATCA requirements and is subject to withholding. This would be the case even if you would not otherwise have been directly subject to withholding.

A number of countries have entered into, and other countries are expected to enter into, agreements with the U.S. to facilitate the type of information reporting required under FATCA. While the existence of such agreements will not eliminate the risk that the preferred stock will be subject to the withholding described above, these agreements are expected to reduce the risk of the withholding for investors in (or investors that indirectly hold the preferred stock through financial institutions in) those countries.

The withholding tax described above could apply to all dividends on the preferred stock. We will not pay any additional amounts in respect of this withholding tax, so if this withholding applies, you will receive less than the amount that you would have otherwise received.

Depending on your circumstances, you may be entitled to a refund or credit in respect of some or all of this withholding. However, even if you are entitled to have any such withholding refunded, the required procedures could be cumbersome and significantly delay your receipt of any withheld amounts. You should consult your own tax advisors regarding FATCA. You should also consult your bank or broker through which you would hold the preferred stock about the likelihood that payments to it (for credit to you) may become subject to withholding in the payment chain.

In addition, your preferred stock may also be subject to other U.S. withholding tax as described herein.

PLAN OF DISTRIBUTION
Initial Offering and Sale of Securities

We may sell the securities from time to time in their initial offering as follows:

- through agents;
- to dealers or underwriters for resale;
- directly to purchasers; or
- through a combination of any of these methods of sale.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders. In some cases, we or dealers acting with us or on our behalf may also purchase securities and reoffer them to the public by one or more of the methods described above. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

The securities we distribute by any of these methods may be sold to the public, in one or more transactions, either:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to prevailing market prices; or
- at negotiated prices.

We may solicit offers to purchase securities directly from the public from time to time. We may also designate agents from time to time to solicit offers to purchase securities from the public on our behalf. If required, the prospectus supplement relating to any particular offering of securities will name any agents designated to solicit offers, and will include information about any commissions we may pay the agents, in that offering. Agents may be deemed to be “underwriters” as that term is defined in the Securities Act of 1933 (the “Securities Act”).

From time to time, we may sell securities to one or more dealers acting as principals. The dealers, who may be deemed to be “underwriters” as that term is defined in the Securities Act, may then resell those securities to the public.

We may sell securities from time to time to one or more underwriters, who would purchase the securities as principal for resale to the public, either on a firm-commitment or best-efforts basis. If we sell securities to underwriters, we may execute an underwriting agreement with them at the time of sale and will name them in the applicable prospectus supplement. In connection with those sales, underwriters may be deemed to have received compensation from us in the form of underwriting discounts or commissions and may also receive commissions from purchasers of the securities for whom they may act as agents. Underwriters may resell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from purchasers for whom they may act as agents. The applicable prospectus supplement will include any required information about underwriting compensation we pay to underwriters, and any discounts, concessions or commissions underwriters allow to participating dealers, in connection with an offering of securities.

If we offer securities in a subscription rights offering to our existing security holders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis.

Table of Contents

If we do not enter into a standby underwriting arrangement, we may retain a dealer-manager to manage a subscription rights offering for us.

We may authorize underwriters, dealers and agents to solicit from third parties offers to purchase securities under contracts providing for payment and delivery on future dates. The applicable prospectus supplement will describe the material terms of these contracts, including any conditions to the purchasers' obligations, and will include any required information about commissions we may pay for soliciting these contracts.

Underwriters, dealers, agents and other persons may be entitled, under agreements that they may enter into with us, to indemnification by us, against certain liabilities, including liabilities under the Securities Act.

In connection with an offering, the underwriters may purchase and sell securities in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of securities than they are required to purchase in an offering. Stabilizing transactions consist of certain bids or purchases made for the purpose of preventing or retarding a decline in the market price of the securities while an offering is in progress.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the underwriters have repurchased securities sold by or for the account of that underwriter in stabilizing or short-covering transactions.

These activities by the underwriters may stabilize, maintain or otherwise affect the market price of the securities. As a result, the price of the securities may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. These transactions may be effected on an exchange or automated quotation system, if the securities are listed on that exchange or admitted for trading on that automated quotation system, or in the over-the-counter market or otherwise.

The underwriters, dealers and agents, as well as their associates, may be customers of or lenders to, and may engage in transactions with and perform services for, The Goldman Sachs Group, Inc. and its subsidiaries in the ordinary course of business. In addition, we expect to offer the securities to or through our affiliates, as underwriters, dealers or agents. Among our affiliates, GS&Co. may offer the securities for sale in the United States and Goldman Sachs International, Goldman Sachs (Asia) L.L.C. and Goldman Sachs (Singapore) Pte. may offer the securities for sale outside the United States. Our affiliates may also offer the securities in other markets through one or more selling agents, including one another.

GS&Co. is a subsidiary of The Goldman Sachs Group, Inc. and The Goldman Sachs Group, Inc. is the parent of GS&Co. FINRA Rule 5121 imposes certain requirements when a member of FINRA, such as GS&Co., distributes an affiliated company's securities. GS&Co. has advised The Goldman Sachs Group, Inc. that each particular offering of securities in which it participates will comply with the applicable requirements of Rule 5121 or any successor FINRA rule.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Your prospectus supplement may provide that the original issue date for your securities may be more than two scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the second business day before the original issue date for

Table of Contents

your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than two scheduled business days after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

Market-Making Resales by Affiliates

This prospectus may be used by GS&Co. in connection with offers and sales of the securities in market-making transactions. In a market-making transaction, GS&Co. may resell a security it acquires from other holders, after the original offering and sale of the security. Resales of this kind may occur in the open market or may be privately negotiated, at prevailing market prices at the time of resale or at related or negotiated prices. In these transactions, GS&Co. may act as principal or agent, including as agent for the counterparty in a transaction in which GS&Co. acts as principal, or as agent for both counterparties in a transaction in which GS&Co. does not act as principal. GS&Co. may receive compensation in the form of discounts and commissions, including from both counterparties in some cases. Other affiliates of The Goldman Sachs Group, Inc. may also engage in transactions of this kind and may use this prospectus for this purpose. These affiliates may include, among others, Goldman Sachs International, Goldman Sachs (Asia) L.L.C. and Goldman Sachs (Singapore) Pte.

The securities to be sold in market-making transactions include securities to be issued after the date of this prospectus, as well as securities previously issued.

The Goldman Sachs Group, Inc. does not expect to receive any proceeds from market-making transactions. The Goldman Sachs Group, Inc. does not expect that GS&Co. or any other affiliate that engages in these transactions will pay any proceeds from its market-making resales to The Goldman Sachs Group, Inc.

Information about the trade and settlement dates, as well as the purchase price, for a market-making transaction will be provided to the purchaser in a separate confirmation of sale.

Unless The Goldman Sachs Group, Inc. or an agent informs you in your confirmation of sale that your security is being purchased in its original offering and sale, you may assume that you are purchasing your security in a market-making transaction.

Matters Relating to Initial Offering and Market-Making Resales

Each series of securities will be a new issue, and there will be no established trading market for any security prior to its original issue date. We may not list any particular series of securities on a securities exchange or quotation system. We have been advised by GS&Co. that it intends to make a market in the securities, and any underwriters to whom we sell securities for public offering may also make a market in those securities. However, neither GS&Co. nor any underwriter that makes a market is obligated to do so, and any of them may stop doing so at any time without notice. No assurance can be given as to the liquidity or trading market for any of the securities.

Unless otherwise indicated in the applicable prospectus supplement or confirmation of sale, the purchase price of the securities will be required to be paid in immediately available funds in New York City.

In this prospectus, an offering of securities refers to the initial offering of the securities made in connection with their original issuance, and does not refer to any subsequent resales of securities in market-making transactions.

CONFLICTS OF INTEREST

GS&Co. is an affiliate of The Goldman Sachs Group, Inc. and, as such, will have a “conflict of interest” in any offering of the securities within the meaning of FINRA Rule 5121. Consequently, any offering of the securities will be conducted in compliance with the provisions of Rule 5121. GS&Co. will not be permitted to sell securities in any offering to an account over which it exercises discretionary authority without the prior specific written approval of the account holder.

EMPLOYEE RETIREMENT INCOME SECURITY ACT

This section is only relevant to you if you are an insurance company or the fiduciary of a pension plan or an employee benefit plan (including a governmental plan, an IRA or a Keogh Plan) proposing to invest in the securities.

The U.S. Employee Retirement Income Security Act of 1974, as amended (“ERISA”) and the U.S. Internal Revenue Code of 1986, as amended (the “Code”), prohibit certain transactions (“prohibited transactions”) involving the assets of an employee benefit plan that is subject to the fiduciary responsibility provisions of ERISA or Section 4975 of the Code (including individual retirement accounts, Keogh plans and other plans described in Section 4975(e)(1) of the Code) (a “Plan”) and certain persons who are “parties in interest” (within the meaning of ERISA) or “disqualified persons” (within the meaning of the Code) with respect to the Plan; governmental plans may be subject to similar prohibitions unless an exemption applies to the transaction. The assets of a Plan may include assets held in the general account of an insurance company that are deemed “plan assets” under ERISA or assets of certain investment vehicles in which the Plan invests. Each of The Goldman Sachs Group, Inc. and certain of its affiliates may be considered a “party in interest” or a “disqualified person” with respect to many Plans, and, accordingly, prohibited transactions may arise if the securities are acquired by or on behalf of a Plan unless those securities are acquired and held pursuant to an available exemption. In general, available exemptions include: transactions effected on behalf of that Plan by a “qualified professional asset manager” (prohibited transaction exemption 84-14) or an “in-house asset manager” (prohibited transaction exemption 96-23), transactions involving insurance company general accounts (prohibited transaction exemption 95-60), transactions involving insurance company pooled separate accounts (prohibited transaction exemption 90-1), transactions involving bank collective investment funds (prohibited transaction exemption 91-38) and transactions with service providers under Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code where the Plan receives no less and pays no more than “adequate consideration” (within the meaning of Section 408(b)(17) of ERISA and Section 4975(f)(10) of the Code). The person making the decision on behalf of a Plan or a governmental plan shall be deemed, on behalf of itself and the plan, by purchasing and holding the securities, or exercising any rights related thereto, to represent that (a) the plan will receive no less and pay no more than “adequate consideration” (within the meaning of Section 408(b)(17) of ERISA and Section 4975(f)(10) of the Code) in connection with the purchase and holding of the securities, (b) none of the purchase, holding or disposition of the securities or the exercise of any rights related to the securities will result in a non-exempt prohibited transaction under ERISA or the Code (or, with respect to a governmental plan, under any similar applicable law or regulation), and (c) neither The Goldman Sachs Group, Inc. nor any of its affiliates is a “fiduciary” (within the meaning of Section 3(21) of ERISA) or, with respect to a governmental plan, under any similar applicable law or regulation) with respect to the purchaser or holder in connection with such person’s acquisition, disposition or holding of the securities, or as a result of any exercise by The Goldman Sachs Group, Inc. or any of its affiliates of any rights in connection with the securities, and neither The Goldman Sachs Group, Inc. nor any of its affiliates has provided investment advice in connection with such person’s acquisition, disposition or holding of the securities.

If you are an insurance company or the fiduciary of a pension plan or an employee benefit plan (including a governmental plan, an IRA or a Keogh plan) and propose to invest in the securities described in this prospectus, you should consult your legal counsel.

VALIDITY OF THE SECURITIES

The validity of the securities that may be issued after the date of this prospectus has been passed upon for The Goldman Sachs Group, Inc. by Sullivan & Cromwell LLP, New York, New York. The validity of certain debt securities that may be issued after the date of this prospectus also has been passed upon for The Goldman Sachs Group, Inc. by Sidley Austin LLP, New York, New York. The opinions of Sullivan & Cromwell LLP and Sidley Austin LLP were based on assumptions about future actions required to be taken by The Goldman Sachs Group, Inc. and the trustee in connection with the issuance and sale of the securities, about the specific terms of the securities and about other matters that may affect the validity of the securities but which could not be ascertained on the date of the relevant opinion.

Each of Sullivan & Cromwell LLP and Sidley Austin LLP has in the past represented and continues to represent Goldman Sachs on a regular basis and in a variety of matters. Sullivan & Cromwell LLP and Sidley Austin LLP also performed services for The Goldman Sachs Group, Inc. in connection with the offering of the securities described in this prospectus.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The financial statements and management’s assessment of the effectiveness of internal control over financial reporting (which is included in Management’s Report on Internal Control over Financial Reporting) of The Goldman Sachs Group, Inc. incorporated in this prospectus by reference to the Annual Report on Form 10-K of The Goldman Sachs Group, Inc. for the year ended December 31, 2021 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

With respect to the unaudited financial information of The Goldman Sachs group, Inc. for (i) the three month periods ended March 31, 2022 and 2021, (ii) the three month and six month periods ended June 30, 2022 and 2021, and (iii) the three month and nine month periods ended September 30, 2022 and 2021, incorporated by reference in this prospectus, PricewaterhouseCoopers LLP reported that they have applied limited procedures in accordance with professional standards for a review of such information. However, their separate reports dated (i) April 29, 2022, (ii) August 3, 2022 and (iii) November 2, 2022 incorporated by reference herein states that they did not audit and they do not express an opinion on that unaudited financial information. Accordingly, the degree of reliance on their report on such information should be restricted in light of the limited nature of the review procedures applied. PricewaterhouseCoopers LLP is not subject to the liability provisions of Section 11 of the Securities Act of 1933 for their report on the unaudited financial information because that report is not a “report” or a “part” of the registration statement prepared or certified by PricewaterhouseCoopers LLP within the meaning of Sections 7 and 11 of the Securities Act of 1933.

**CAUTIONARY STATEMENT PURSUANT TO THE PRIVATE
SECURITIES LITIGATION REFORM ACT OF 1995**

We have included or incorporated by reference in this prospectus statements that may constitute “forward-looking statements” within the meaning of the safe harbor provisions of The Private Securities Litigation Reform Act of 1995. These forward-looking statements are not historical facts but instead represent only our belief regarding future events, many of which, by their nature, are inherently uncertain and outside of our control. It is possible that our actual results may differ, possibly materially, from the anticipated results indicated in these forward-looking statements.

Information regarding important factors that could cause actual results to differ, perhaps materially, from those in our forward-looking statements is contained under “Risk Factors” in Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which is incorporated in this prospectus by reference (and in any of our annual reports for a subsequent fiscal year that are so incorporated). See “Available Information” above for information about how to obtain a copy of this annual report.

We have not authorized anyone to provide any information or to make any representations other than those contained or incorporated by reference in this prospectus or in any free writing prospectuses we have prepared. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

TABLE OF CONTENTS

	Page
Available Information	2
Prospectus Summary	4
Risks Relating to Regulatory Resolution	
Strategies and Long-Term Debt Requirements	8
Use of Proceeds	13
Description of Debt Securities We May Offer	14
Description of Warrants We May Offer	74
Description of Purchase Contracts We May Offer	91
Description of Units We May Offer	96
Description of Preferred Stock We May Offer	102
Description of Common Stock We May Offer	110
Description of Capital Stock of The Goldman Sachs Group, Inc.	111
Legal Ownership and Book-Entry Issuance	116
Considerations Relating to Floating Rate Securities	122
Considerations Relating to Indexed Securities	128
Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency	129
United States Taxation	132
Plan of Distribution	153
Conflicts of Interest	156
Employee Retirement Income Security Act	157
Validity of the Securities	158
Independent Registered Public Accounting Firm	159
Cautionary Statement Pursuant to the Private Securities Litigation Reform Act of 1995	159

\$196,691,644,885
The Goldman Sachs
Group, Inc.

Debt Securities
Warrants
Purchase Contracts
Units
Preferred Stock
Depositary Shares

