

GOLDMAN SACHS GROUP INC

Form 424B2

November 30, 2018

Table of Contents

Filed Pursuant to Rule 424(b)(2)

Registration Statement No. 333-219206

**GS Finance Corp.**

\$425,000,000\*

Large Cap Growth Index-Linked ETNs due 2028

guaranteed by

**The Goldman Sachs Group, Inc.**

**The notes do not bear interest.** The amount that you will be paid on your notes at stated maturity (April 3, 2028) or redemption (which could be postponed up to 30 calendar days if a market disruption event occurs) is based on the leveraged performance of the Russell 1000<sup>®</sup> Growth Total Return Index, less significant applicable fees.

**Due to the complexity and number of features of these notes, the following is, at best, a high level summary of the terms of the notes and the risks associated therewith. You may lose all or a significant portion of your investment. In order to make an informed investment in the notes you must read the disclosure herein to better understand the terms and all of the risks of your investment, including the credit risk of GS Finance Corp. and The Goldman Sachs Group, Inc. See pages S-27 and S-41.**

The notes had two times leverage on the inception date (March 29, 2018), have 2.2279 times leverage on the date hereof and are rebalanced to approximately two times leverage both quarterly and in the event of a decline in the index level of 20% or more since the prior rebalancing date. **As a result, the actual leverage may be greater or less than two times between rebalancing dates (which could be postponed up to 5 trading days if a market disruption event occurs, potentially causing leverage to significantly exceed two).** These notes are not appropriate for long-term or passive investors or investors who lack experience investing in leveraged products.

**Because the notes rebalance at least quarterly to approximately two times leverage, you should closely monitor the performance of the index and the notes. If on a rebalancing date the index has declined since the last rebalancing date, you should carefully consider redeeming or selling your notes. Due to the fee payable upon redemption and potential delays due to the minimum redemption amount and potential redemption postponements, selling your notes will have less risk as to timing and might pay you more net of fees despite an offered price lower than the redemption value.**

There are four separate significant fees payable by you in connection with holding or redeeming your notes or payment at maturity (**Due to the variable nature of these fees and the fact that they are uncapped, the total amount of such fees cannot be estimated for any given period. These fees will significantly reduce the performance of your notes. Even if the index appreciates, due to the rebalancing features and the fees payable by you, you may suffer a significant loss on your investment**):

Daily financing fee: 3-month USD LIBOR *plus* 0.81% per annum *times* the financing level on the prior rebalancing date (including the inception date);

Additional daily fee: 0.65% per annum *times* 50% of the asset position on the prior trading day (the asset position reflects the levered investment in the index);

Rebalancing fee: 0.06% *times* the absolute value of the rebalancing amount; and

Settlement fee upon redemption by you or at maturity: 0.06% *times* the asset position of your note.

The notes are redeemable by you, subject to a **minimum aggregate redemption amount of \$500,000 (5,000 notes) and a settlement fee which may exceed 0.06% of the face amount.** We will redeem your notes automatically if the index has declined 30% or more since the last rebalancing date or at our option on any day.

At maturity (if your notes have not been previously redeemed) or upon redemption of the notes by you, the amount that you will be paid on your notes is based on the closing indicative note value, **minus the settlement fee.** The closing indicative note value is equal to (i) the asset position (\$200 on the inception date, \$236.9114 on the date hereof and which will increase or decrease depending on the index performance), *minus* (ii) the financing level (\$100 on the inception date, \$130.5738 on the date hereof and which will increase due to the daily investor fee and the rebalancing fee, if any, and will increase or decrease on each rebalancing date based on the index performance since the last rebalancing date).

**Original issue date:** for the eleventh reopened notes\*, December 3, 2018

**Original issue price:** for the eleventh reopened notes\*, \$106.3376 for each \$100 face amount (equal to the closing indicative note value on the date hereof), representing 106.3376% of the aggregate face amount of the eleventh reopened notes

**Underwriting commission:** for the eleventh reopened notes\*, \$0.05 for each \$100 face amount (approximately 0.04702% of the closing indicative note value on the date hereof), representing 0.05% of the aggregate face amount of the eleventh reopened notes

**Net proceeds to the issuer:** for the eleventh reopened notes\*, \$106.3376 for each \$100 face amount (100% of the closing indicative note value on the date hereof), representing 106.3376% of the aggregate face amount of the eleventh reopened notes

**Neither the 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. The notes 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.**

**Goldman Sachs & Co. LLC**

Amendment No. 11 dated November 28, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

---

**Table of Contents**

\*This amendment no. 11 dated November 28, 2018 (prospectus supplement) to prospectus supplement no. 3,160 dated March 29, 2018 relates to \$35,000,000 face amount of the notes, which we call the eleventh reopened notes, which are initially being offered on the date of this prospectus supplement. \$50,000,000 face amount of notes, which we call the original notes, were offered on March 29, 2018, as described in the accompanying prospectus supplement no. 3,160 dated March 29, 2018. \$25,000,000 face amount of the notes, which we call the first reopened notes, were offered on April 30, 2018, as described in the accompanying amendment no. 1 dated April 30, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$25,000,000 face amount of the notes, which we call the second reopened notes, were offered on May 17, 2018, as described in the accompanying amendment no. 2 dated May 17, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$25,000,000 face amount of the notes, which we call the third reopened notes, were offered on June 1, 2018, as described in the accompanying amendment no. 3 dated June 1, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$50,000,000 face amount of the notes, which we call the fourth reopened notes, were offered on June 20, 2018, as described in the accompanying amendment no. 4 dated June 20, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$40,000,000 face amount of the notes, which we call the fifth reopened notes, were offered on July 12, 2018, as described in the accompanying amendment no. 5 dated July 12, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$35,000,000 face amount of the notes, which we call the sixth reopened notes, were offered on August 16, 2018, as described in the accompanying amendment no. 6 dated August 16, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$35,000,000 face amount of the notes, which we call the seventh reopened notes, were offered on September 6, 2018, as described in the accompanying amendment no. 7 dated September 6, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$35,000,000 face amount of the notes, which we call the eighth reopened notes, were offered on September 28, 2018, as described in the accompanying amendment no. 8 dated September 28, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$35,000,000 face amount of the notes, which we call the ninth reopened notes, were offered on October 18, 2018, as described in the accompanying amendment no. 9 dated October 18, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. \$35,000,000 face amount of the notes, which we call the tenth reopened notes, were offered on November 5, 2018, as described in the accompanying amendment no. 10 dated November 5, 2018 to prospectus supplement no. 3,160 dated March 29, 2018. The original notes, first reopened notes, second reopened notes, third reopened notes, fourth reopened notes, fifth reopened notes, sixth reopened notes, seventh reopened notes, eighth reopened notes, ninth reopened notes, tenth reopened notes and eleventh reopened notes have identical terms and conditions and have the same CUSIP (362273302) and ISIN (US3622733026) numbers. In this prospectus supplement, the term notes means, collectively, the original notes, the first reopened notes, the second reopened notes, the third reopened notes, the fourth reopened notes, the fifth reopened notes, the sixth reopened notes, the seventh reopened notes, the eighth reopened notes, the ninth reopened notes, the tenth reopened notes and the eleventh reopened notes.

The issue price, underwriting commission and net proceeds listed above relate to the notes we sell on the date of this prospectus supplement to Goldman Sachs & Co. LLC (GS&Co.). The notes are listed on NYSE Arca, Inc. under the ticker symbol FRLG. GS&Co. intends to sell the aggregate face amount of the offered notes on NYSE Arca, Inc. or otherwise from time to time at market prices prevailing at the time of sale, at prices related to market prices or at negotiated prices. Subsequently, to the extent that the notes continue to be listed and an active secondary market in the notes exists, we expect that investors will purchase and sell the notes primarily in this secondary market. No assurance can be given as to the continuation of the listing for the life of the offered notes, or the liquidity or trading market for the offered notes. **The return (whether positive or negative) on your investment in notes will depend in part on the issue price you pay for such notes.**

We may, from time to time, in our sole discretion, choose to issue and sell additional amounts of the offered notes having the same terms set forth in this prospectus supplement, but at issue prices and with underwriting discounts or commissions and net proceeds that differ from the amounts set forth above. We are not obligated to issue and sell additional notes at any time to GS&Co., and GS&Co. is not obligated to sell additional notes to investors or dealers at

any time. If we discontinue issuances and sales of the notes, or if GS&Co. discontinues sales of the notes, the price and liquidity of the notes may be subject to significant distortions.

GS Finance Corp. (GSFC) may use this prospectus in the initial sale of the notes. In addition, GS&Co. or any other affiliate of GSFC may use this prospectus in a market-making transaction in a note after its initial sale. ***Unless GSFC or its agent informs the purchaser otherwise in the confirmation of sale, this prospectus is being used in a market-making transaction.***

**Table of Contents**

**About Your Prospectus**

The notes are part of the Medium-Term Notes, Series E program of GS Finance Corp., and are fully and unconditionally guaranteed by The Goldman Sachs Group, Inc. This prospectus includes this prospectus supplement and the accompanying documents listed below. This prospectus supplement constitutes a supplement to the documents listed below and should be read in conjunction with such documents:

Amendment No. 10 dated November 5, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 9 dated October 18, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 8 dated September 28, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 7 dated September 6, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018:

Amendment No. 6 dated August 16, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 5 dated July 12, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 4 dated June 20, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 3 dated June 1, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 2 dated May 17, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Amendment No. 1 dated April 30, 2018 to Prospectus Supplement No. 3,160 dated March 29, 2018

Prospectus supplement no. 3,160 dated March 29, 2018

Prospectus supplement dated July 10, 2017

Prospectus dated July 10, 2017

The information in this prospectus supplement supersedes any conflicting information in the documents listed above. In addition, some of the terms or features described in the listed documents may not apply to your notes.

S-3

---

Table of Contents

**FREQUENTLY ASKED QUESTIONS AND ANSWERS**

*The following is only a summary and should be read together with, and not as a substitute for, the disclosure and other terms and information in this prospectus supplement, including under Summary Information Key Terms , Additional Risk Factors Specific to Your Notes and Specific Terms of Your Notes .*

***What Are the Notes and How Do They Work?***

The notes are part of the Medium-Term Notes, Series E program of GS Finance Corp., and are guaranteed by The Goldman Sachs Group, Inc. Although the return on the notes will be based on the performance of the Russell 1000<sup>®</sup> Growth Total Return Index (the index ), the payment of any amount due on the notes is subject to the credit risk of GS Finance Corp., as issuer of the notes, and the credit risk of The Goldman Sachs Group, Inc., as guarantor of the notes.

Unlike conventional debt securities, the notes do not pay interest and do not repay a fixed amount of principal at maturity or upon any redemption. Instead, the notes offer a payment at maturity or upon any redemption based on the two times leveraged performance, compounded at least quarterly, of the index, **less significant applicable fees**, described below under *What Fees are Charged Under the Notes?* . The notes will mature on April 3, 2028 and are subject to redemption at the option of the issuer, redemption at the option of the holder and automatic redemption, described below under *What are the Applicable Redemption Features and How Do They Work?* .

The notes are designed to reset to approximately 2 times leveraged exposure to the index on each rebalancing date as described below under *How Do the Leverage and Rebalancing Features Work?* . Rebalancing dates occur quarterly and each time the closing level of the index falls by an amount that is 20% or more of the closing level of the index on the prior rebalancing date.

Accordingly, the notes generally depreciate in value as the level of the index decreases and appreciate in value as the level of the index increases, provided that, with respect to an increase in the level of the index, such increase is sufficient to offset the negative effect of the daily investor fee and any applicable rebalancing fee and settlement fee (the fees account for the costs to finance the leveraged exposure and to hedge our obligations under the notes).

The notes are very sensitive to changes in the performance of the index, and returns on the notes may be negatively impacted in complex and unpredictable ways by the volatility of the index. As the notes are designed to achieve their stated investment objective on a quarterly basis, their performance over longer periods of time is affected by compounding and index performance and can differ significantly from their stated quarterly objective. The notes are riskier than securities that have intermediate- or long-term investment objectives that do not have quarterly compounding. **Any decision to invest in the notes, and to hold for longer than one quarter, should be made with extreme caution. These notes are not appropriate for long-term or passive investors or investors who lack experience investing in leveraged products.**

***How Can You Determine the Value of Your Notes?***

The closing indicative note value and intraday indicative note value are each intended to approximate the intrinsic economic value of a \$100 face amount of the notes (1 note) at the time of calculation.

The closing indicative note value is calculated once on each trading day after the closing level of the index is published at approximately 4:00 p.m., New York City time, and will fluctuate over time based on changes in the closing level of the index, subject to accrued fees. The closing indicative note value is the value that is referenced in calculating any payment at maturity or upon any redemption other than an automatic redemption.

The closing indicative note value on the initial valuation date (the inception date, March 29, 2018) equals \$100, the stated face amount per note. The closing indicative note value on any other valuation date (valuation dates are the trading days during the period commencing on the initial valuation date and ending on the final valuation date (March 29, 2028)) will equal (i) the asset position on such valuation date *minus* (ii) the financing level on such valuation date, subject to a minimum of \$0. The asset position represents a hypothetical leveraged investment in the index (\$200 on the initial valuation date), which is funded by the initial investment (\$100 per note on the initial valuation date) and the financing level (\$100 on the initial valuation date).

The asset position reflects the exposure to the index. The asset position value increases or decreases depending on the performance of the index.

The financing level represents a hypothetical loan and the accrual of the daily investor fee and the rebalancing fee (on each rebalancing date). On each rebalancing date, the exposure to the index and the hypothetical loan are both increased or decreased based on the index performance since the last rebalancing date. Such changes are reflected in the rebalancing amount adjustments that are made to the asset position and the financing level. Essentially, an increase to the asset position is financed by a corresponding increase to the hypothetical loan, and a decrease to the asset position will generate hypothetical proceeds used to partially repay the hypothetical loan. The daily investor fee is



---

**Table of Contents**

intended to compensate the issuer for providing investors leveraged participation in the index, including financing fees that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index. See *What Fees are Charged Under the Notes?* below. Increases in the financing level will reduce the closing indicative note value and therefore the economic value of your notes.

The asset position and financing level are calculated as follows:

The asset position is equal to \$200 on the initial valuation date and on any subsequent valuation date will equal the *sum* of (i) the *product* of (a) the asset position on the immediately preceding valuation date *times* (b) the index performance factor on such subsequent valuation date *plus* (ii) the rebalancing amount (if any) on such subsequent valuation date.

The financing level is equal to \$100 on the initial valuation date and on any subsequent valuation date will equal the *sum* of (i) the financing level on the immediately preceding valuation date *plus* (ii) the daily investor fee on such subsequent valuation date *plus* (iii) the rebalancing fee (if any) on such subsequent valuation date *plus* (iv) the rebalancing amount (if any) on such subsequent valuation date.

The index performance factor is equal to 1 on the initial valuation date and on each subsequent valuation date will be based on the percentage change in the closing level of the index on such valuation date from the closing level of the index on the preceding valuation date. The index performance factor on any valuation date other than the initial valuation date is *equal* to the *quotient* of (i) the closing level of the index on the current valuation date *divided* by (ii) the closing level of the index on the immediately preceding valuation date. For example, if the closing level of the index on a valuation date is 150 and decreases to 120 on the subsequent valuation date, the index performance factor will equal 0.80 (i.e. 120 divided by 150).

The rebalancing amount represents the change in the exposure to the index as a result of any rebalancing event. On each rebalancing date, a rebalancing amount is added to or subtracted from the asset position and the financing level depending on the performance of the index since the preceding rebalancing date so that the leverage is reset to approximately 2. The rebalancing amount is calculated as described under *How Do the Leverage and Rebalancing Features Work?* below. For example, assuming that (1) the financing fee rate and the fee rates used in calculating the daily investor fee and the rebalancing fee are all set to zero; (2) on the immediately prior rebalancing date, the closing level of the index is 100, the closing indicative note value is \$100, the asset position is \$200 and the financing level is \$100, (3) the closing level of the index has declined to 81 on the current quarterly rebalancing calculation date and (4) the closing level of the index is unchanged, at 81, from the current quarterly rebalancing calculation date to the current quarterly rebalancing date:

**on the quarterly rebalancing calculation date,**

- o the asset position will equal \$162 (i.e.  $\$200 \times (81/100)$ )
- o the financing level will equal \$100; and

- o the closing indicative note value will equal \$62 (i.e.  $\$162 - \$100$ )

**on the quarterly rebalancing date *before* rebalancing occurs,**

- o the asset position will equal \$162 (i.e.  $\$162 \times (81/81)$ );
- o the financing level will equal \$100; and
- o the closing indicative note value will equal \$62 (i.e.  $\$162 - \$100$ )

**on the quarterly rebalancing date *after* rebalancing occurs,**

- o the **rebalancing amount** will equal -\$38 (i.e.  $((2 \times \$62) - \$162) \times 81/81$ ).
- o the asset position will equal \$124 (i.e.  $\$162 - \$38$ );
- o the financing level will equal \$62 (i.e.  $\$100 - \$38$ ); and
- o the closing indicative note value will equal \$62 (i.e.  $\$124 - \$62$ ).

As the above example demonstrates, if the index performance from the immediately prior rebalancing date to the current quarterly rebalancing calculation date is negative, the rebalancing amount is *deducted* from the asset position (reducing the exposure to the index) and the financing level (reflecting a partial repayment of the hypothetical loan using the hypothetical proceeds realized from the reduction of the asset position). Similarly, if the index performance from the immediately prior rebalancing date to the current quarterly rebalancing calculation date is positive, the rebalancing amount will be *added* to the asset position (increasing the exposure to the index) and the financing level (reflecting an increase in the hypothetical loan to finance the additional exposure to the index).

---

**Table of Contents**

The intraday indicative note value will fluctuate within a trading day based on changes in the intraday level of the index, subject to applicable fees. The intraday indicative note value is calculated and published every 15 seconds on each trading day during the hours on which trading is generally conducted on NYSE Arca, and before the closing indicative note value is published for such day.

The closing indicative note value and intraday indicative note value are published for informational purposes by an entity appointed by the calculation agent. It is important to understand that the closing indicative note value and intraday indicative note value are not the same as the price at which an investor may buy or sell the notes. The price at which an investor may buy or sell the notes will depend on market forces and the availability of willing buyers and sellers and may, therefore, differ from the closing indicative note value or intraday indicative note value at any time.

***What Payments Will Be Made Under the Notes at Maturity and Upon Redemption?***

The amount that you will be paid on your notes at maturity or redemption is based on the leveraged performance of the index, **less significant applicable fees**, as described under *What Fees are Charged Under the Notes* below. At maturity or upon redemption, as applicable, for each \$100 face amount of your notes, you will receive an amount in cash equal to:

if your notes have not been previously redeemed, (i) the closing indicative note value on the final valuation date *minus* (ii) the settlement fee of 0.06% of the asset position on the final valuation date;

if your notes are automatically redeemed, the automatic redemption note value on the applicable redemption valuation date (the automatic redemption note value is described below under *What are the Applicable Redemption Features and How Do They Work?* );

if you elect to have us redeem at least \$500,000 face amount of your notes (i.e., 5,000 notes), (i) the closing indicative note value on the applicable redemption valuation date *minus* (ii) the settlement fee on such redemption valuation date; or

if we redeem your notes at our option, the closing indicative note value on the applicable redemption valuation date.

The closing indicative note value is equal to (i) the asset position, which is equal to \$200 on the initial valuation date and on any subsequent valuation date will increase or decrease depending on the index performance factor, *minus* (ii) the financing level, which is equal to \$100 on the initial valuation date and on any subsequent valuation date will reflect the accrual of the daily investor fee as further described below under *What Fees are Charged Under the Notes?* . The closing indicative note value, the asset position and the financing level are described above under *How Can You Determine the Value of Your Notes?* .

The index performance factor is equal to 1 on the initial valuation date and on each subsequent valuation date will be based on the percentage change in the closing level of the index on such valuation date from the closing level of the index on the preceding valuation date (provided that, for purposes of determining the amount payable if the notes are automatically redeemed, the index performance factor may be determined by reference to the VWAP level of the index as further described below under *What are the Applicable Redemption Features and How Do They Work?* ).

The deduction of the settlement fee in the calculation of any payment at maturity or upon redemption at your option will reduce amounts payable on the notes. Accordingly, in order for you to avoid a loss on your notes, the index will need to increase sufficiently from the time you purchase your notes to compensate for the settlement fee.

The applicable redemption valuation dates are described below under *What are the Applicable Redemption Features and How Do They Work?*

***What Fees are Charged Under the Notes?***

There are significant fees payable by you to compensate the issuer for providing investors leveraged participation in the index. Such fees are assessed on each valuation date and rebalancing date, upon holder redemption and at stated maturity.

*Daily Investor Fee:* the daily investor fee is assessed daily and is intended to compensate the issuer for providing investors leveraged participation in the index, including financing fees that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index. The daily investor fee is equal to the *product* of:

o (i) *the sum* of

(a) the *product* of (1) the financing level on the immediately preceding rebalancing date *times*  
(2) the financing fee rate of 0.81% per annum *plus* 3-month USD LIBOR on the preceding quarterly rebalancing date *plus*

**Table of Contents**

(b) the *product* of (1) 0.65% per annum *times* (2) 50% *times* (3) the asset position on the immediately preceding valuation date *times*

- o (ii) the *quotient* of (a) the number of calendar days from, but excluding, the immediately preceding valuation date to, and including, the current valuation date *divided by* (b) 360. **LIBOR is being modified, see page S-35**

*Rebalancing Fee:* the rebalancing fee is charged to account for our brokerage and transaction costs due to the change in the exposure to the index and is equal to the *product* of:

- o (i) the rebalancing fee rate of 0.06% *times*
- o (ii) the absolute value of the rebalancing amount on such valuation date (*e.g.*, if the rebalancing amount is -\$10, the absolute value of the rebalancing amount will be \$10; if the rebalancing amount is \$10, the absolute value of the rebalancing amount will be \$10).

*Settlement Fee:* upon holder redemption and at stated maturity, a settlement fee is assessed to account for the brokerage and transaction costs in unwinding any hedge we may have relating to the notes.

- o The settlement fee upon holder redemption equals the product of (i) 0.06% *times* (ii) the asset position on the applicable redemption valuation date.
  
- o At maturity, the settlement fee is equal to the *product* of (i) 0.06% *times* (ii) the asset position on the final valuation date.

**Fees will significantly reduce any amount payable on your notes, regardless of the performance of the index.**

***How Do the Leverage and Rebalancing Features Work?***

The notes are designed to provide 2 times leveraged exposure to both the positive and negative performance of the index on the initial valuation date and to reset to approximately 2 times leveraged exposure on each rebalancing date (each quarterly rebalancing date and loss rebalancing date).

A quarterly rebalancing date is the valuation date immediately following a quarterly rebalancing calculation date (the last valuation date of each March, June, September and December, commencing in June 2018 and ending in December 2027). The rebalancing adjustment on each quarterly rebalancing date will have the effect of re-leveraging your notes with the aim of resetting the then-current leverage factor back to approximately 2. This means that after each quarterly rebalancing date, a constant percentage increase in the closing level of the index may have more or less of a positive effect on the value of your notes relative to before such quarterly rebalancing date.

A loss rebalancing date is the valuation date immediately following a loss rebalancing event. A loss rebalancing event is deemed to have occurred if, on any valuation date that is not a rebalancing date, the closing level of the index is *equal to or less than* 80% of the closing level of the index on the immediately preceding rebalancing date (or, if none, the inception date). A loss rebalancing event will result in the notes being rebalanced on the loss rebalancing date and

will have the effect of deleveraging your notes with the aim of resetting the then-current leverage factor back to approximately 2. This means that after the applicable loss rebalancing date, a constant percentage increase in the closing level of the index will have less of a positive effect on the value of your notes relative to before such loss rebalancing date.

The leverage factor reflects the leveraged exposure to the index and will reset to approximately 2 on each rebalancing date.

On each rebalancing date, the closing indicative note value is further reduced by the rebalancing fee. **Leverage on days other than rebalancing dates may be greater or less than 2 and may significantly decrease the amount payable on your notes.** Rebalancing dates may be postponed upon the occurrence of a market disruption event. See *What Happens If There is a Market Disruption Event on a Redemption Valuation Date, the Automatic Redemption Valuation Date, a Loss Rebalancing Date, a Quarterly Rebalancing Date or the Final Valuation Date?* below.

On each rebalancing date, a rebalancing amount is added to or subtracted from the asset position and the financing level depending on the performance of the index since the preceding rebalancing date so that the leverage is reset to approximately 2. The rebalancing amount represents the change in the exposure to the index as a result of any rebalancing event. See *How Can You Determine the Value of Your Notes?* above.

The rebalancing amount is equal to the *product* of:

(i) the *result* of:

- o (a) the *product* of (1) 2 *times* (2) the closing indicative note value on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent) *minus*

**Table of Contents**

- o (b) the asset position on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent) *times*
  
- (ii) the *quotient* of:
  - o (a) the closing level of the index on the current rebalancing date *divided* by
  
  - o (b) the closing level of the index on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent).

***What are the Applicable Redemption Features and How Do They Work?***

There are three types of redemption: redemption at the option of the holder; redemption at the option of the issuer; and automatic redemption. The different payments, depending on the type of redemption are described under *What Payments Will Be Made Under the Notes at Maturity and Upon Redemption?* above.

*Redemption at the Option of the Holder.* You may elect to have us redeem your notes on any valuation date, provided that for any redemption request you redeem at least \$500,000 face amount of your notes (which is equal to 5,000 notes and which may be aggregated with other noteholders) and follow the procedures described elsewhere in this prospectus supplement. If you purchase or at any time own less than \$500,000 face amount of the notes, you will not be able to have us redeem your notes unless you follow the procedures of your broker-dealer to aggregate your notes with other noteholders.

You will not know the amount you will receive on the redemption date at the time you request that we redeem your notes. Your notice to us to redeem your notes is irrevocable and must be received by us no later than 3:00 p.m., New York City time, on the applicable valuation date. Provided that the notice of redemption is received by the deadline, the redemption valuation date will be the following valuation date. Therefore, you will not know the amount payable on your notes until the first valuation date after the valuation date on which you provide your notice to us to redeem the notes. As a result, you will be exposed to market risk in the event the market fluctuates after we confirm the validity of your notice of redemption to exercise your rights to have us redeem your notes and prior to the applicable redemption date.

Notwithstanding the above, if you provide notice of holder redemption but an automatic redemption event occurs on or prior to the applicable redemption valuation date, your notice of holder redemption will be superseded and your notes will be automatically redeemed on the relevant redemption date at an amount equal to the automatic redemption note value. Additionally, if we provide notice of an issuer redemption of the notes, any subsequent notice of holder redemption will not be effective.

*Redemption at the Option of the Issuer.* We may redeem your notes at our option prior to the stated maturity date, in whole but not in part. If we provide notice of an issuer redemption of the notes but an automatic redemption event occurs on or prior to the applicable redemption valuation date, our notice of issuer redemption will be superseded and your notes will be automatically redeemed on the relevant redemption date at an amount equal to the automatic redemption note value.

*Automatic Redemption.* We will automatically redeem your notes, in whole but not in part, if, on any valuation date prior to the final valuation date, the intraday level of the index is equal to or less than 70% of the closing level of the index on the immediately preceding rebalancing date (or if none, the inception date).

If your notes are automatically redeemed, on the applicable redemption date you will receive, for each \$100 face amount of your notes, an amount in cash equal to the *result* of:

(i) the *product* of (a) the asset position on the valuation date immediately preceding the automatic redemption event date *times* (b) the automatic redemption index performance factor *minus*

(ii) the financing level on the automatic redemption event date, subject to a minimum of \$0.

The determination of the automatic redemption note value upon an automatic redemption event may be based on the index VWAP level as described below.

The amount payable on your notes following an automatic redemption of the notes may be calculated using a formula based on the index VWAP level, not the closing level of the index, if an automatic redemption event occurs prior to 2:30 p.m. New York City time, or at or after 3:30 p.m., New York City time, on the automatic redemption event date. The closing level of the index is used to calculate the amount payable under the notes at maturity and upon any other redemption event. The index VWAP level is intended to replicate the proceeds realized from a sale of the index stocks in the quantities that they comprise the index gradually over the relevant VWAP period and will likely differ from the closing level of the index. Therefore, your payment upon an automatic redemption event may be different from the payment that you would receive if such payment were determined by reference to the closing level of the index. In addition, the index VWAP level may differ from the level of the index at the time the automatic redemption event occurred.



## **Table of Contents**

### ***Is GS Finance Corp. or GS&Co. Obligated to Purchase or Sell Notes?***

In our sole discretion, we may decide to reopen the offered notes and issue and sell such additional notes from time to time to GS&Co., and in GS&Co.'s sole discretion, it may decide to sell additional notes to investors or to dealers. However, we and GS&Co. are under no obligation to issue or sell additional notes at any time, and if we and GS&Co. do issue and sell additional notes, we or GS&Co. may limit or restrict such sales, and we or GS&Co. may stop and subsequently resume selling additional notes at any time. If we and GS&Co. start selling additional notes, we or GS&Co. may stop selling additional notes for any reason, which could materially and adversely affect the price and liquidity of the notes in the secondary market.

We have been advised by GS&Co. that it intends to make a market in the notes. However, neither GS&Co. nor any of our other affiliates 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 the notes.

### ***What Happens If There is a Market Disruption Event on a Redemption Valuation Date, the Automatic Redemption Valuation Date, a Loss Rebalancing Date, a Quarterly Rebalancing Date or the Final Valuation Date?***

The calculation agent can postpone a redemption valuation date, the automatic redemption valuation date, a loss rebalancing date, a quarterly rebalancing date or the final valuation date, as applicable, if a market disruption event or a non-trading day occurs or is continuing. If the calculation agent determines that, on a date that would otherwise be a redemption valuation date, the automatic redemption valuation date, a loss rebalancing date, a quarterly rebalancing date or the final valuation date, as applicable, a market disruption event has occurred or is continuing or that day is not a trading day, the applicable redemption valuation date, the automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or the final valuation date, as applicable, will be postponed until the first following trading day on which the calculation agent determines that a market disruption event does not occur and is not continuing. In no case, however, will (i) a redemption valuation date, the automatic redemption valuation date or the final valuation date be postponed by more than thirty calendar days or (ii) a loss rebalancing date or quarterly rebalancing date be postponed by more than five trading days. As a result of any postponement, you will be exposed to market risk in the event the market fluctuates between the originally scheduled redemption valuation date, automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or final valuation date, as applicable, and the actual redemption valuation date, automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or final valuation date. In such a case, the calculation agent will determine the applicable closing level or index VWAP level for the applicable redemption valuation date, the automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or the final valuation date, as applicable, based on the procedures described under Specific Terms of Your Notes Consequences of a Market Disruption Event or a Non-Trading Day below.

### ***What Does the Index Measure and Who Publishes It?***

The index is sponsored by FTSE Russell ( Russell ) and is a sub-index of the Russell 1000 Index. The index is designed to track the performance of the large- and mid-capitalization segment of the U.S. equity market and is predominantly comprised of growth stocks, meaning stocks issued by companies whose earnings are expected to grow at an above-average rate relative to the market. For more information about the index, see The Index below.

### ***Where Can You Find More Information Relating to the Notes?***

The Bloomberg symbols under which information relating to the notes can be located are set forth below. The publication of this information may occasionally be subject to delay or postponement.

Closing level of the index and intraday level of the index: RU10GRTR Index

Closing indicative note value and intraday indicative note value: FRLGIV Index

Asset position: FRLGAP Index

Financing level: FRLGFL Index

Loss rebalancing trigger: FRLGRT Index

Automatic redemption trigger: FRLGAT Index

S-9

**Table of Contents****SUMMARY INFORMATION**

*We refer to the notes we are offering by this prospectus supplement as the offered notes or the notes. Each of the offered notes has the terms described below and under Specific Terms of Your Notes on page S-41. Please note that in this prospectus supplement, references to GS Finance Corp., we, our and us mean only GS Finance Corp. and do not include its subsidiaries or affiliates, references to The Goldman Sachs Group, Inc., our parent company, mean only The Goldman Sachs Group, Inc. and do not include its subsidiaries or affiliates and references to Goldman Sachs mean The Goldman Sachs Group, Inc. together with its consolidated subsidiaries and affiliates, including us. Also, references to the accompanying prospectus mean the accompanying prospectus, dated July 10, 2017, and references to the accompanying prospectus supplement mean the accompanying prospectus supplement, dated July 10, 2017, for Medium-Term Notes, Series E, in each case of GS Finance Corp. and The Goldman Sachs Group, Inc. References to the indenture in this prospectus supplement mean the senior debt indenture, dated as of October 10, 2008, as supplemented by the First Supplemental Indenture, dated as of February 20, 2015, each among us, as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York Mellon, as trustee. This indenture, as so supplemented and as further supplemented thereafter, is referred to as the GSFC 2008 indenture in the accompanying prospectus supplement.*

**Key Terms**

**Issuer:** GS Finance Corp.

**Guarantor:** The Goldman Sachs Group, Inc.

**Index:** Russell 1000® Growth Total Return Index (Bloomberg symbol, RU10GRTR Index), as published by FTSE Russell

**Index stocks:** the stocks comprising the index

**Specified currency:** U.S. dollars ( \$ )

**Face amount:** each offered note will have a face amount of \$100 or an integral multiple of \$100 in excess thereof; \$425,000,000 in the aggregate for all the offered notes

**Supplemental discussion of U.S. federal income tax consequences:** you will be obligated pursuant to the terms of the notes in the absence of a change in law, an administrative determination or a judicial ruling to the contrary to characterize each note for all tax purposes as a pre-paid derivative contract in respect of the index, as described under Supplemental Discussion of U.S. Federal Income Tax Consequences herein. Pursuant to this approach, it is the opinion of Sidley Austin LLP that upon the sale, exchange, redemption or maturity of your notes, it would be reasonable for you to recognize capital gain or loss equal to the difference, if any, between the amount of cash you receive at such time and your tax basis in your notes.

**Amount payable on your notes:**

*At maturity:*

if your notes have not been previously redeemed, on the stated maturity date we will pay you, for each \$100 face amount of your notes, an amount in cash *equal* to (i) the closing indicative note value on the final valuation date *minus* (ii) the settlement fee on the final valuation date

*Upon redemption at the option of the holder:*

if you elect to have us redeem at least \$500,000 face amount of your notes, on the applicable redemption date we will pay you, for each \$100 face amount of your notes so redeemed, an amount in cash *equal* to (i) the closing indicative note value on the applicable redemption valuation date *minus* (ii) the settlement fee on such redemption valuation date

*Upon redemption at the option of the issuer:*

if we redeem your notes at our option, on the applicable redemption date we will pay you, for each \$100 face amount of your notes, an amount in cash equal to the closing indicative note value on the applicable redemption valuation date

*Upon automatic redemption:*

if your notes are automatically redeemed, on the applicable redemption date we will pay you, for each \$100 face amount of your notes, an amount in cash equal to the automatic redemption note value

---

**Table of Contents**

**Closing indicative note value:**

on the initial valuation date, \$100; or

on any valuation date other than the initial valuation date, (i) the asset position on such valuation date *minus* (ii) the financing level on such valuation date, subject to a minimum of \$0

The closing indicative note value is intended to approximate the intrinsic economic value of the notes at a particular point in time and will fluctuate over time based on the changes in the closing level of the index, subject to applicable fees. ***The closing indicative note value is not the closing price or any trading price of the notes in the secondary market, and the trading price of notes at any time may vary significantly from the closing indicative note value.***

The closing indicative note value is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGIV Index .

**Intraday indicative note value:** at any given time on any valuation date after the initial valuation date, before the closing indicative note value for such day is published, (i) the intraday asset position at such time on the current valuation date *minus* (ii) the financing level on the immediately preceding valuation date *minus* (iii) the daily investor fee on the current valuation date, subject to a minimum of \$0.

The intraday indicative note value is intended to approximate the intrinsic economic value of the notes during the trading day and will fluctuate within a trading day based on changes in the intraday level of the index, subject to applicable fees. ***The intraday indicative note value is not a trading price of the notes in the secondary market, and the trading price of notes at any time may vary significantly from the intraday indicative note value.***

The intraday indicative note value is expected to be published every 15 seconds on each valuation day during the hours on which trading is generally conducted on NYSE Arca, so long as no market disruption event has occurred or is continuing. The intraday indicative note value is expected to be published under the Bloomberg symbol FRLGIV Index .

**Asset position:**

on the initial valuation date, \$200, which is equal to the initial leverage factor *times* the face amount per note; or

on any valuation date other than the initial valuation date, the *sum* of (i) the *product* of (a) the asset position on the immediately preceding valuation date *times* (b) the index performance factor on the current valuation date *plus* (ii) the rebalancing amount (if any) on the current valuation date

The asset position represents a hypothetical leveraged investment in the index and reflects the exposure to the index. The value of the asset position will increase or decrease depending on the performance of the index and, on each rebalancing date, will further increase or decrease to reflect changes to the exposure to the index due to the rebalancing adjustment. The asset position is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGAP Index . As of the date hereof,

the asset position is \$236.9114.

**Intraday asset position:** at any given time on any valuation date after the initial valuation date, the *product* of (i) the asset position on the immediately preceding valuation date *times* (ii) the intraday index performance factor.

**Settlement fee:** the settlement fee is a fee imposed upon redemption at the option of the holder and payment on the stated maturity date and is *equal* to the *product* of 0.06% *times* the asset position on the applicable redemption valuation date or the final valuation date, as applicable

The settlement fee is assessed to account for the brokerage and transaction costs in unwinding any hedge the issuer may have relating to the notes.

**Index performance factor:**

on the initial valuation date, 1; or

on any valuation date other than the initial valuation date, the *quotient* of (i) the closing level of the index on the current valuation date *divided by* (ii) the closing level of the index on the immediately preceding valuation date

**Intraday index performance factor:** at any given time on any valuation date after the initial valuation date, the *quotient* of (i) the applicable intraday level of the index at such time *divided by* (ii) the closing level of the index on the immediately preceding valuation date

**Initial leverage factor:** 2

**Leverage factor:** on any valuation date, the *quotient* of (i) the asset position on such valuation date *divided by* (ii) the closing indicative note value on such valuation date

The leverage factor reflects the leveraged exposure to the index and will reset to approximately 2 on each rebalancing date. As of the date hereof, the leverage factor is 2.2279.

**Table of Contents**

**Financing level:**

on the initial valuation date, \$100; or

on any valuation date other than the initial valuation date, the *sum* of (i) the financing level on the immediately preceding valuation date *plus* (ii) the daily investor fee on the current valuation date *plus* (iii) the rebalancing fee (if any) on the current valuation date *plus* (iv) the rebalancing amount (if any) on the current valuation date.

The financing level represents a hypothetical loan and the accrual of the daily investor fee and the rebalancing fee (on each rebalancing date). On each rebalancing date, the financing level will increase due to the rebalancing fee and will increase or decrease to reflect changes in the hypothetical loan associated with the rebalanced exposure to the index. The daily investor fee is intended to compensate the issuer for providing investors leveraged participation in the index, including financing fees that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index. The financing level is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGFL Index . As of the date hereof, the financing level is \$130.5738.

**Daily investor fee:**

on the initial valuation date, \$0; or

on any valuation date other than the initial valuation date, the *product* of (i) *the sum* of (a) the *product* of (1) the financing level on the immediately preceding rebalancing date (or if none, the inception date) *times* (2) the financing fee rate *plus* (b) the *product* of (1) 0.65% per annum *times* (2) 50% *times* (3) the asset position on the immediately preceding valuation date *times* (ii) the *quotient* of (a) the number of calendar days from, but excluding, the immediately preceding valuation date to, and including, the current valuation date *divided by* (b) 360. In no case will the daily investor fee be negative.

The daily investor fee is assessed daily and is intended to compensate the issuer for providing investors leveraged participation in the index, including financing fees that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index.

**Financing fee rate:**

on any valuation date prior to and including the first quarterly rebalancing date, 3.12175%; or

on any valuation date after the first quarterly rebalancing date, the *sum* of (i) 0.81% per annum *plus* (ii) 3-month USD LIBOR calculated on the immediately preceding quarterly rebalancing date

The financing fee rate is intended to represent a rate for a financing fee that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index.

**3-month USD LIBOR:** on any day, the 3-month London Interbank Offered Rate (LIBOR) for deposits in U.S. dollars as it appears on Reuters screen LIBOR01 page (or any successor or replacement service or page thereof) at 11:00 a.m., London time on such day (or, if such day is not a London business day, the immediately preceding London business day), subject to adjustment as described under **Specific Terms of Your Notes 3-Month USD LIBOR** on page S-44. **LIBOR is being modified, see page S-35.**

**Discontinuance of 3-month USD LIBOR:** if the calculation agent determines, on a day on which 3-month USD LIBOR is scheduled to be determined under the terms of the notes, that 3-month USD LIBOR 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 3-month USD LIBOR 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 valuation dates 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 3-month USD LIBOR rate, in a manner that is consistent with industry-accepted practices for such substitute or successor rate. Unless the calculation agent uses a substitute or successor rate as so provided, the provisions as described under **Specific Terms of Your Notes Financing Fee Rate** on page S-43 will apply.

**Closing level of the index:** as described under **Specific Terms of Your Notes Special Calculation Provisions Closing Level of the Index** on page S-51

**Intraday level of the index:** as described under **Specific Terms of Your Notes Special Calculation Provisions Intraday Level of the Index** on page S-51

**Inception date:** March 29, 2018



**Table of Contents**

**Initial valuation date:** the inception date

**Original issue date:** for the eleventh reopened notes, December 3, 2018; the eleventh reopened notes have the same CUSIP and ISIN as the original notes

**Final valuation date:** March 29, 2028, unless postponed as described under *Specific Terms of Your Notes* *Final Valuation Date* on page S-44

**Valuation dates:** each trading day during the period commencing on the initial valuation date and ending on the final valuation date, as described under *Specific Terms of Your Notes* *Valuation Dates* on page S-44

**Stated maturity date:** April 3, 2028, unless postponed as described under *Specific Terms of Your Notes* *Stated Maturity Date* on page S-44

**Redemption (three types: at the option of the holder; at the option of the issuer; and automatic):**

*Redemption at the option of the holder:*

You may elect to have us redeem your notes prior to the stated maturity date, in whole or in part, provided that in each case you redeem at least \$500,000 face amount of your notes. See *Specific Terms of Your Notes* *Redemption* *Redemption at the Option of the Holder* on page S-46. You must follow the procedures described in this prospectus supplement to validly exercise your election for early redemption. **If you purchase or at any time own less than \$500,000 face amount of the notes, you will not be able to elect to have us redeem your notes because each redemption at your election must be in respect of at least \$500,000 face amount of your notes (which may be aggregated with other noteholders seeking to redeem).**

**Notwithstanding the above, if you provide notice of holder redemption but an automatic redemption event occurs on or prior to the applicable redemption valuation date, your notice of holder redemption will be superseded and your notes will be automatically redeemed on the redemption date (for the automatic redemption) at an amount equal to the automatic redemption note value. Additionally, if we provide notice of an issuer redemption of the notes, any subsequent notice of holder redemption will not be effective. See**

*Additional Risk Factors Specific to Your Notes* *You Will Not Know the Amount Payable on Your Notes at the Time You Request That We Redeem Your Notes and an Automatic Redemption Event Could Cause Your Notice to be Superseded. Additionally, to be Effective, Your Request That We Redeem Your Notes Must be Received Before We Provide Notice of an Issuer Redemption* below.

*Redemption at the option of the issuer:*

We may redeem your notes at our option prior to the stated maturity date, in whole but not in part. See *Specific Terms of Your Notes* *Redemption* *Redemption at the Option of the Issuer* on page S-46. **Notwithstanding the foregoing, if we provide notice of an issuer redemption of the notes but an automatic redemption event occurs on or prior to the applicable redemption valuation date, our notice of issuer redemption will be superseded and your notes will be automatically redeemed on the redemption date at an amount equal to the automatic redemption note value.**

*Automatic redemption:*

We will automatically redeem your notes, in whole but not in part, if, at any time on any valuation date prior to the final valuation date, the intraday level of the index is equal to or less than 70% of the closing level of the index on the immediately preceding rebalancing date (or if none, the inception date). See Specific Terms of Your Notes Redemption Automatic Redemption on page S-47

**Redemption valuation date (with respect to redemption at the option of the holder):** the first valuation date following the date on which you deliver notice to us in compliance with the procedures described under Specific Terms of Your Notes Redemption Redemption at the Option of the Holder Redemption at the Option of the Holder Requirements on page S-46, unless postponed as provided under Specific Terms of Your Notes Redemption Redemption Valuation Date

**Redemption date (with respect to redemption at the option of the holder):** the third business day following the applicable redemption valuation date

**Redemption valuation date (with respect to redemption at the option of the issuer):** the tenth valuation date following the date on which we provide notice to holders of the notes and the trustee, as described under Specific Terms of Your Notes Redemption Redemption at the Option of the Issuer on page S-46, unless postponed as provided under Specific Terms of Your Notes Redemption Redemption Valuation Date

**Redemption date (with respect to redemption at the option of the issuer):** the third business day following the applicable redemption valuation date

**Redemption date (with respect to automatic redemption):** the fifth business day following the automatic redemption valuation date

**Table of Contents**

**Automatic redemption event:** we will automatically redeem your notes, in whole but not in part, if, at any time on any valuation date prior to the final valuation date, the intraday level of the index is equal to or less than the automatic redemption trigger

**If an automatic redemption event occurs on a rebalancing date, the notes will be automatically redeemed pursuant to the automatic redemption event without giving regard to the rebalancing adjustment. If we provide notice of an issuer redemption of the notes and then an automatic redemption event occurs on or prior to the applicable redemption valuation date, our notice of issuer redemption will be superseded and your notes will be automatically redeemed on the relevant redemption date at an amount equal to the automatic redemption note value. Additionally, if you provide notice of a holder redemption but an automatic redemption event occurs on or prior to the applicable redemption valuation date, your notice of holder redemption will be superseded and your notes will be automatically redeemed on the redemption date (for the automatic redemption) at an amount equal to the automatic redemption note value.** See Additional Risk Factors Specific to Your Notes You Will Not Know the Amount Payable on Your Notes at the Time You Request That We Redeem Your Notes and an Automatic Redemption Event Could Cause Your Notice to be Superseded. Additionally, to be Effective, Your Request That We Redeem Your Notes Must be Received Before We Provide Notice of an Issuer Redemption below.

**Automatic redemption event date:** the valuation date on which the automatic redemption event occurs

**Automatic redemption valuation date:** the automatic redemption event date, as described under Specific Terms of Your Notes Redemption Automatic Redemption on page S-47, unless postponed as provided under Specific Terms of Your Notes Redemption Automatic Redemption Valuation Date

**Automatic redemption trigger:** at any time on any valuation date, 70% of the closing level of the index on the immediately preceding rebalancing date (or if none, the inception date). The automatic redemption trigger is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGAT Index .

**Automatic redemption note value:** upon the occurrence of an automatic redemption event, the *result* of (i) the *product* of (a) the asset position on the valuation date immediately preceding the automatic redemption event date *times* (b) the automatic redemption index performance factor *minus* (ii) the financing level on the automatic redemption event date, subject to a minimum of \$0

**Automatic redemption index performance factor:**

if an automatic redemption event occurs prior to 2:30 p.m., New York City time, or at or after 3:30 p.m., New York City time, on the automatic redemption event date, the *quotient* of (i) the index VWAP level divided by (ii) the closing level of the index on the valuation date immediately preceding the automatic redemption event date; or

if an automatic redemption event occurs at or after 2:30 p.m., New York City time, but prior to 3:30 p.m., New York City time, on the automatic redemption event date, the *quotient* of (i) the closing level of the index on the automatic redemption event date *divided* by (ii) the closing level of the index on the valuation date immediately preceding the automatic redemption event date

**Index VWAP level:** on any applicable valuation date, the *sum* of the *products*, as calculated for each index stock, of (i) the VWAP of such index stock *times* (ii) the *quotient* of (a) the available float shares of such index stock on such valuation date *divided* by (b) the index divisor on such valuation date.

The index VWAP level is intended to replicate the proceeds realized from a sale of the index stocks in the quantities that they comprise the index gradually over the relevant VWAP period.

**Volume-weighted average price (VWAP):** with respect to each index stock, on any applicable valuation date, the *sum* of the *quotients*, calculated for each transaction on such index stock on the primary exchange during the applicable VWAP period, of (i) the *product* of (a) the gross price at which such transaction is executed *times* (b) the relevant number of shares of the index stock referenced in such transaction *divided* by (ii) the total number of shares of the index stock traded on the primary exchange during such VWAP period, subject to adjustment as described under Specific Terms of Your Notes Volume-Weighted Average Price on page S-48

**Table of Contents**

**VWAP period:**

if an automatic redemption event occurs prior to 2:30 p.m., New York City time, on the automatic redemption event date, the one hour period starting thirty minutes after the automatic redemption event occurs, subject to adjustment as described under Specific Terms of Your Notes VWAP Period on page S-48; or

if an automatic redemption event occurs at or after 3:30 p.m., New York City time, on the automatic redemption event date, the one hour period starting at 10:00 a.m., New York City time, on the valuation date immediately following such automatic redemption event date, subject to adjustment as described under Specific Terms of Your Notes VWAP Period on page S-48

**Available float shares:** with respect to each index stock, on any applicable valuation date, the *result*, as published by the index sponsor, of (i) total shares of such index stock outstanding *minus* (ii) the shares of such index stock held by control holders

**Index divisor:** on any applicable valuation date, a value calculated and published by the index sponsor that is intended to maintain conformity in index values over time

**Primary exchange:** for each index stock, the exchange on which such index stock has its primary listing, as determined by the calculation agent

**Rebalancing:** rebalancing can occur on a quarterly rebalancing date or because of a loss rebalancing event. As of the date hereof, the notes most recently rebalanced on October 1, 2018.

**Loss rebalancing event:** if, on any valuation date that is not a rebalancing date, the closing level of the index is equal to or less than the loss rebalancing trigger, a loss rebalancing event is deemed to have occurred on such valuation date. A loss rebalancing event will result in the notes being rebalanced on the loss rebalancing date and will have the effect of deleveraging your notes with the aim of resetting the then-current leverage factor back to approximately 2. This means that after the applicable loss rebalancing date, a constant percentage increase in the closing level of the index will have less of a positive effect on the value of your notes relative to before such loss rebalancing date

**Loss rebalancing trigger:** on any valuation date, 80% of the closing level of the index on the immediately preceding rebalancing date (or if none, the initial valuation date). The loss rebalancing trigger is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGRT Index .

**Loss rebalancing date:** the first valuation date immediately following any valuation date on which a loss rebalancing event occurs, unless postponed as described under Specific Terms of Your Notes Loss Rebalancing Date on page S-48

**Quarterly rebalancing calculation date:** the last valuation date of each March, June, September and December, commencing in June 2018 and ending in December 2027.

**Quarterly rebalancing date:** the first valuation date immediately following each quarterly rebalancing calculation date, unless postponed as described under Specific Terms of Your Notes Quarterly Rebalancing Date on page S-49.

The rebalancing adjustment on each quarterly rebalancing date will have the effect of re-leveraging your notes with the aim of resetting the then-current leverage factor back to approximately 2. This means that after each quarterly rebalancing date, a constant percentage increase in the closing level of the index may have more or less of a positive effect on the value of your notes relative to before such quarterly rebalancing date.

**Rebalancing date:** a quarterly rebalancing date or loss rebalancing date

**Rebalancing amount:**

on any valuation date that is not a rebalancing date, \$0; or

on any valuation date that is a rebalancing date, the *product* of (i) the *result* of (a) the *product* of (1) 2 *times* (2) the closing indicative note value on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent) *minus* (b) the asset position on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent) *times* (ii) the *quotient* of (a) the closing level of the index on the current rebalancing date *divided* by (b) the closing level of the index on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent).

The rebalancing amount represents the change in the exposure to the index as a result of any rebalancing event. On each rebalancing date, a rebalancing amount is added to or subtracted from the asset position and the financing level depending on the performance of the index since the preceding rebalancing date so that the leverage is reset to approximately 2.

**Table of Contents**

**Rebalancing fee:**

on any valuation date that is not a rebalancing date, \$0; or

on any valuation date that is a rebalancing date, the *product* of (i) the rebalancing fee rate *times* (ii) the absolute value of the rebalancing amount on such rebalancing date. In no case will the rebalancing fee be negative.

The rebalancing fee is charged to account for the issuer's brokerage and transaction costs due to the change in the exposure to the index.

**Rebalancing fee rate:** 0.06%

**Bloomberg symbols:**

The Bloomberg symbols under which information relating to the notes can be located are set forth below. The publication of this information may occasionally be subject to delay or postponement.

Closing level of the index and intraday level of the index: RU10GRTR Index

Closing indicative note value and intraday indicative note value: FRLGIV Index

Asset position: FRLGAP Index

Financing level: FRLGFL Index

Loss rebalancing trigger: FRLGRT Index

Automatic redemption trigger: FRLGAT Index

**Business day:** as described under Specific Terms of Your Notes Special Calculation Provisions Business Day on page S-51

**London business day:** as described under Specific Terms of Your Notes Special Calculation Provisions London Business Day on page S-51

**Trading day:** as described under Specific Terms of Your Notes Special Calculation Provisions Trading Day on page S-51

**Listing:** the notes are listed on NYSE Arca under the ticker symbol `FRLG` . To the extent that the notes continue to be listed and an active secondary market in the notes exists, we expect that investors will purchase and sell the notes primarily in this secondary market. No assurance can be given as to the continuation of the listing for the life of the offered notes, or the liquidity or trading market for the offered notes.

**Interest:** the notes do not bear interest

**Calculation agent:** Goldman Sachs & Co. LLC (GS&Co.)

**CUSIP:** 362273302

**ISIN:** US3622733026

S-16



**Table of Contents****HYPOTHETICAL EXAMPLES**

The following examples are provided for purposes of illustration only. They should not be taken as an indication or prediction of future investment results and merely are intended to illustrate the impact that hypothetical changes in the closing levels of the index could have on the amount payable on the stated maturity date or upon redemption as well as the impact, on a daily accrued basis, of the daily investor fee, the settlement fee and, if applicable, the rebalancing fee on the payment on the stated maturity or upon redemption.

The examples below are based on a range of index levels that are entirely hypothetical; the index level on any day throughout the life of the notes cannot be predicted. The index has been highly volatile in the past meaning that the index level has changed considerably in relatively short periods and its performance and volatility cannot be predicted for any future period.

The information in the following examples reflects hypothetical returns on the offered notes assuming that they are purchased on the inception date at the face amount and held to the redemption date or the stated maturity date. If you sell your notes in a secondary market prior to the stated maturity date, your return will depend upon the market value of your notes at the time of sale, which may be affected by a number of factors that are not reflected in the examples below, such as interest rates, the volatility of the index, the creditworthiness of GS Finance Corp., as issuer, and the creditworthiness of The Goldman Sachs Group, Inc., as guarantor. The information in the examples also reflect the key terms and assumptions in the box below, which vary from the actual terms on the inception date and on the date hereof.

**Key Terms and Assumptions**

|  |                 |
|--|-----------------|
| Face amount                                      | \$100           |
| Closing level of the index on the inception date | 100             |
| Financing fee rate                               | 3.00% per annum |
| Fee rate used to compute the daily investor fee  | 0.65% per annum |
| Fee rate used to compute the settlement fee      | 0.06%           |
| Rebalancing fee rate                             | 0.06%           |
| Term of the notes                                | 20 quarters     |
| Number of calendar days per quarter              | 91              |

Neither a market disruption event nor a non-trading day occurs on any originally scheduled valuation date

No change in or affecting any of the index stocks or the method by which the index sponsor calculates the index

Notes purchased on the original issue date for the original notes issued on April 3, 2018 at the face amount

For ease of analysis and presentation, examples 1 through 6 depict the closing indicative note value on the quarterly rebalancing calculation dates instead of each valuation date. In these examples, we assume a constant index performance factor on each valuation date during a quarter. Because the daily investor fees take into account the asset

position on each trading day, the total investor fees during a quarter are dependent on the actual changes in the level of the index throughout the quarter (which will differ from the changes assumed in these examples). Further, again for presentation simplicity, we assume that the rebalance takes place on the quarterly rebalancing calculation date instead of the quarterly rebalancing date.

S-17

**Table of Contents****Example 1:**

In this example, the hypothetical closing level of the index is unchanged through the term of the notes. Because the hypothetical closing level of the index on each valuation date is greater than the loss rebalancing trigger, a loss rebalancing event does not occur. This example shows that fees will significantly reduce the performance of your notes. Further, even without a change to the level of the index, fees will cause the leverage factor to be different from 2 on each quarterly rebalancing calculation date, which will result in a rebalancing fee.

| Quarterly Rebalancing Calculation Date  | Closing Level of the Index | Index Return | Closing Indicative Note Value | Total Daily Investor Fee | Asset Position | Financing Level | Rebalancing Amount | Rebalancing Fee | Settlement Fee |
|---|----------------------------|--------------|-------------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|----------------|
| Inception   | 100.00                     | -            | \$100.00                      | -                        | \$200.00       | \$100.00        | \$0.00             | \$0.0000        | -              |
| 1   | 100.00                     | 0.00%        | \$99.08                       | \$0.92                   | \$200.00       | \$100.92        | (\$1.85)           | \$0.0011        | \$0.12         |
| 2   | 100.00                     | 0.00%        | \$98.16                       | \$0.91                   | \$198.15       | \$99.99         | (\$1.83)           | \$0.0011        | \$0.12         |
| 3   | 100.00                     | 0.00%        | \$97.26                       | \$0.91                   | \$196.32       | \$99.07         | (\$1.81)           | \$0.0011        | \$0.12         |
| 4   | 100.00                     | 0.00%        | \$96.36                       | \$0.90                   | \$194.51       | \$98.15         | (\$1.80)           | \$0.0011        | \$0.12         |
| 5   | 100.00                     | 0.00%        | \$95.47                       | \$0.89                   | \$192.71       | \$97.25         | (\$1.78)           | \$0.0011        | \$0.11         |
| 6   | 100.00                     | 0.00%        | \$94.58                       | \$0.88                   | \$190.93       | \$96.35         | (\$1.76)           | \$0.0011        | \$0.11         |
| 7   | 100.00                     | 0.00%        | \$93.71                       | \$0.87                   | \$189.17       | \$95.46         | (\$1.75)           | \$0.0010        | \$0.11         |
| 8   | 100.00                     | 0.00%        | \$92.85                       | \$0.86                   | \$187.42       | \$94.58         | (\$1.73)           | \$0.0010        | \$0.11         |
| 9   | 100.00                     | 0.00%        | \$91.99                       | \$0.86                   | \$185.69       | \$93.70         | (\$1.72)           | \$0.0010        | \$0.11         |
| 10  | 100.00                     | 0.00%        | \$91.14                       | \$0.85                   | \$183.98       | \$92.84         | (\$1.70)           | \$0.0010        | \$0.11         |
| 11  | 100.00                     | 0.00%        | \$90.30                       | \$0.84                   | \$182.28       | \$91.98         | (\$1.68)           | \$0.0010        | \$0.11         |
| 12  | 100.00                     | 0.00%        | \$89.46                       | \$0.83                   | \$180.59       | \$91.13         | (\$1.67)           | \$0.0010        | \$0.11         |
| 13  | 100.00                     | 0.00%        | \$88.64                       | \$0.83                   | \$178.92       | \$90.29         | (\$1.65)           | \$0.0010        | \$0.11         |
| 14  | 100.00                     | 0.00%        | \$87.82                       | \$0.82                   | \$177.27       | \$89.45         | (\$1.64)           | \$0.0010        | \$0.11         |
| 15  | 100.00                     | 0.00%        | \$87.01                       | \$0.81                   | \$175.63       | \$88.63         | (\$1.62)           | \$0.0010        | \$0.10         |
| 16  | 100.00                     | 0.00%        | \$86.20                       | \$0.80                   | \$174.01       | \$87.81         | (\$1.61)           | \$0.0010        | \$0.10         |
| 17  | 100.00                     | 0.00%        | \$85.41                       | \$0.80                   | \$172.40       | \$87.00         | (\$1.59)           | \$0.0010        | \$0.10         |
| 18  | 100.00                     | 0.00%        | \$84.62                       | \$0.79                   | \$170.81       | \$86.19         | (\$1.58)           | \$0.0009        | \$0.10         |
| 19  | 100.00                     | 0.00%        | \$83.83                       | \$0.78                   | \$169.23       | \$85.40         | (\$1.56)           | \$0.0009        | \$0.10         |
| 20  | 100.00                     | 0.00%        | \$83.06                       | \$0.77                   | \$167.67       | \$84.61         | (\$1.55)           | \$0.0009        | \$0.10         |
| <b>Total return of the index from the inception date to the final valuation date:</b> |                            |              |                               |                          |                | 0.00%           |                    |                 |                |
| <b>Total return of the notes from the inception date to the final valuation date:</b> |                            |              |                               |                          |                | -17.04%         |                    |                 |                |

**Table of Contents****Example 2:**

In this example, the hypothetical closing level of the index increases by 0.46% during each hypothetical quarter. Because the hypothetical closing level of the index on each valuation date is greater than the loss rebalancing trigger, a loss rebalancing event does not occur. This example shows that the index must increase significantly in order to offset the effect of the daily investor fee and the settlement fee. Because the closing level of the index does not increase sufficiently, the amount payable is less than the face amount of the notes in spite of a 9.61% increase in the index during the hypothetical term of the notes. **Therefore, it is possible that you will suffer significant losses even if the long-term performance of the index is positive.**

| Quarterly Rebalancing Calculation Date  | Closing Level of the Index | Index Return | Closing Indicative Note Value | Total Daily Investor Fee | Asset Position | Financing Level | Rebalancing Amount | Rebalancing Fee | Settlement Fee |
|---|----------------------------|--------------|-------------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|----------------|
| Inception   | 100.00                     | -            | \$100.00                      | -                        | \$200.00       | \$100.00        | \$0.00             | \$0.0000        | -              |
| 1   | 100.46                     | 0.46%        | \$100.00                      | \$0.92                   | \$200.92       | \$100.92        | (\$0.93)           | \$0.0006        | \$0.12         |
| 2   | 100.92                     | 0.46%        | \$99.99                       | \$0.92                   | \$200.91       | \$100.92        | (\$0.93)           | \$0.0006        | \$0.12         |
| 3   | 101.39                     | 0.46%        | \$99.99                       | \$0.92                   | \$200.91       | \$100.92        | (\$0.93)           | \$0.0006        | \$0.12         |
| 4   | 101.85                     | 0.46%        | \$99.99                       | \$0.92                   | \$200.90       | \$100.91        | (\$0.93)           | \$0.0006        | \$0.12         |
| 5   | 102.32                     | 0.46%        | \$99.98                       | \$0.92                   | \$200.89       | \$100.91        | (\$0.93)           | \$0.0006        | \$0.12         |
| 6   | 102.79                     | 0.46%        | \$99.98                       | \$0.92                   | \$200.89       | \$100.91        | (\$0.93)           | \$0.0006        | \$0.12         |
| 7   | 103.26                     | 0.46%        | \$99.98                       | \$0.92                   | \$200.88       | \$100.90        | (\$0.93)           | \$0.0006        | \$0.12         |
| 8   | 103.74                     | 0.46%        | \$99.97                       | \$0.92                   | \$200.87       | \$100.90        | (\$0.93)           | \$0.0006        | \$0.12         |
| 9   | 104.22                     | 0.46%        | \$99.97                       | \$0.92                   | \$200.86       | \$100.90        | (\$0.93)           | \$0.0006        | \$0.12         |
| 10  | 104.70                     | 0.46%        | \$99.96                       | \$0.92                   | \$200.86       | \$100.89        | (\$0.93)           | \$0.0006        | \$0.12         |
| 11  | 105.18                     | 0.46%        | \$99.96                       | \$0.92                   | \$200.85       | \$100.89        | (\$0.93)           | \$0.0006        | \$0.12         |
| 12  | 105.66                     | 0.46%        | \$99.96                       | \$0.92                   | \$200.84       | \$100.88        | (\$0.93)           | \$0.0006        | \$0.12         |
| 13  | 106.15                     | 0.46%        | \$99.95                       | \$0.92                   | \$200.84       | \$100.88        | (\$0.93)           | \$0.0006        | \$0.12         |
| 14  | 106.64                     | 0.46%        | \$99.95                       | \$0.92                   | \$200.83       | \$100.88        | (\$0.93)           | \$0.0006        | \$0.12         |
| 15  | 107.13                     | 0.46%        | \$99.95                       | \$0.92                   | \$200.82       | \$100.87        | (\$0.93)           | \$0.0006        | \$0.12         |
| 16  | 107.62                     | 0.46%        | \$99.94                       | \$0.92                   | \$200.81       | \$100.87        | (\$0.93)           | \$0.0006        | \$0.12         |
| 17  | 108.11                     | 0.46%        | \$99.94                       | \$0.92                   | \$200.81       | \$100.87        | (\$0.93)           | \$0.0006        | \$0.12         |
| 18  | 108.61                     | 0.46%        | \$99.94                       | \$0.92                   | \$200.80       | \$100.86        | (\$0.93)           | \$0.0006        | \$0.12         |
| 19  | 109.11                     | 0.46%        | \$99.93                       | \$0.92                   | \$200.79       | \$100.86        | (\$0.93)           | \$0.0006        | \$0.12         |
| 20  | 109.61                     | 0.46%        | \$99.93                       | \$0.92                   | \$200.78       | \$100.86        | (\$0.93)           | \$0.0006        | \$0.12         |
| <b>Total return of the index from the inception date to the final valuation date:</b> |                            |              |                               |                          |                | 9.61%           |                    |                 |                |
| <b>Total return of the notes from the inception date to the final valuation date:</b> |                            |              |                               |                          |                | -0.19%          |                    |                 |                |

**Table of Contents****Example 3:**

In this example, the hypothetical closing level of the index decreases by 1.00% during each quarter. Because the hypothetical closing level of the index on each valuation date is greater than the loss rebalancing trigger, a loss rebalancing event does not occur. This example shows that because an investment in the notes is leveraged, and because of the fees, any decrease in the level of the index may result in a significantly greater decrease in the amount payable on your notes.

| Quarterly Rebalancing Calculation Date  | Closing Level of the Index | Index Return | Closing Indicative Note Value | Total Daily Investor Fee | Asset Position | Financing Level | Rebalancing Amount | Rebalancing Fee | Settlement Fee |
|---|----------------------------|--------------|-------------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|----------------|
| Inception   | 100.00                     | -            | \$100.00                      | -                        | \$200.00       | \$100.00        | \$0.00             | \$0.0000        | -              |
| 1   | 99.00                      | -1.00%       | \$97.08                       | \$0.92                   | \$198.00       | \$100.92        | (\$3.84)           | \$0.0023        | \$0.12         |
| 2   | 98.01                      | -1.00%       | \$94.24                       | \$0.89                   | \$192.21       | \$97.98         | (\$3.74)           | \$0.0022        | \$0.11         |
| 3   | 97.03                      | -1.00%       | \$91.48                       | \$0.87                   | \$186.59       | \$95.11         | (\$3.63)           | \$0.0022        | \$0.11         |
| 4   | 96.06                      | -1.00%       | \$88.81                       | \$0.84                   | \$181.14       | \$92.33         | (\$3.52)           | \$0.0021        | \$0.11         |
| 5   | 95.10                      | -1.00%       | \$86.21                       | \$0.82                   | \$175.84       | \$89.63         | (\$3.42)           | \$0.0021        | \$0.10         |
| 6   | 94.15                      | -1.00%       | \$83.69                       | \$0.79                   | \$170.70       | \$87.01         | (\$3.32)           | \$0.0020        | \$0.10         |
| 7   | 93.21                      | -1.00%       | \$81.24                       | \$0.77                   | \$165.71       | \$84.46         | (\$3.22)           | \$0.0019        | \$0.10         |
| 8   | 92.27                      | -1.00%       | \$78.87                       | \$0.75                   | \$160.86       | \$81.99         | (\$3.13)           | \$0.0019        | \$0.09         |
| 9   | 91.35                      | -1.00%       | \$76.56                       | \$0.73                   | \$156.16       | \$79.60         | (\$3.04)           | \$0.0018        | \$0.09         |
| 10  | 90.44                      | -1.00%       | \$74.32                       | \$0.71                   | \$151.59       | \$77.27         | (\$2.95)           | \$0.0018        | \$0.09         |
| 11  | 89.53                      | -1.00%       | \$72.15                       | \$0.69                   | \$147.16       | \$75.01         | (\$2.86)           | \$0.0017        | \$0.09         |
| 12  | 88.64                      | -1.00%       | \$70.04                       | \$0.67                   | \$142.86       | \$72.82         | (\$2.78)           | \$0.0017        | \$0.08         |
| 13  | 87.75                      | -1.00%       | \$67.99                       | \$0.65                   | \$138.68       | \$70.69         | (\$2.70)           | \$0.0016        | \$0.08         |
| 14  | 86.87                      | -1.00%       | \$66.00                       | \$0.63                   | \$134.62       | \$68.62         | (\$2.62)           | \$0.0016        | \$0.08         |
| 15  | 86.01                      | -1.00%       | \$64.07                       | \$0.61                   | \$130.69       | \$66.61         | (\$2.54)           | \$0.0015        | \$0.08         |
| 16  | 85.15                      | -1.00%       | \$62.20                       | \$0.59                   | \$126.86       | \$64.67         | (\$2.47)           | \$0.0015        | \$0.07         |
| 17  | 84.29                      | -1.00%       | \$60.38                       | \$0.57                   | \$123.15       | \$62.77         | (\$2.39)           | \$0.0014        | \$0.07         |
| 18  | 83.45                      | -1.00%       | \$58.61                       | \$0.56                   | \$119.55       | \$60.94         | (\$2.32)           | \$0.0014        | \$0.07         |
| 19  | 82.62                      | -1.00%       | \$56.90                       | \$0.54                   | \$116.06       | \$59.16         | (\$2.26)           | \$0.0014        | \$0.07         |
| 20  | 81.79                      | -1.00%       | \$55.24                       | \$0.52                   | \$112.66       | \$57.43         | (\$2.19)           | \$0.0013        | \$0.07         |
| <b>Total return of the index from the inception date to the final valuation date:</b> |                            |              |                               |                          |                | -18.21%         |                    |                 |                |
| <b>Total return of the notes from the inception date to the final valuation date:</b> |                            |              |                               |                          |                | -44.83%         |                    |                 |                |

**Table of Contents****Example 4:**

In this example, the hypothetical closing level of the index increases by 1.00% during each quarter. Because the hypothetical closing level of the index on each valuation date is greater than the loss rebalancing trigger, a loss rebalancing event does not occur. This example shows that the performance of your notes will likely differ from two times the performance of the index due, in part, to the effect of fees and the rebalancing feature of the note.

| Quarterly Rebalancing Calculation Date  | Closing Level of the Index | Index Return | Closing Indicative Note Value | Total Daily Investor Fee | Asset Position | Financing Level | Rebalancing Amount | Rebalancing Fee | Settlement Fee |
|---|----------------------------|--------------|-------------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|----------------|
| Inception   | 100.00                     | -            | \$100.00                      | -                        | \$200.00       | \$100.00        | \$0.00             | \$0.0000        | -              |
| 1   | 101.00                     | 1.00%        | \$101.08                      | \$0.92                   | \$202.00       | \$100.92        | \$0.15             | \$0.0001        | \$0.12         |
| 2   | 102.01                     | 1.00%        | \$102.16                      | \$0.93                   | \$204.17       | \$102.01        | \$0.15             | \$0.0001        | \$0.12         |
| 3   | 103.03                     | 1.00%        | \$103.26                      | \$0.94                   | \$206.37       | \$103.11        | \$0.16             | \$0.0001        | \$0.12         |
| 4   | 104.06                     | 1.00%        | \$104.38                      | \$0.95                   | \$208.59       | \$104.22        | \$0.16             | \$0.0001        | \$0.13         |
| 5   | 105.10                     | 1.00%        | \$105.50                      | \$0.96                   | \$210.84       | \$105.34        | \$0.16             | \$0.0001        | \$0.13         |
| 6   | 106.15                     | 1.00%        | \$106.64                      | \$0.97                   | \$213.11       | \$106.47        | \$0.16             | \$0.0001        | \$0.13         |
| 7   | 107.21                     | 1.00%        | \$107.78                      | \$0.98                   | \$215.40       | \$107.62        | \$0.16             | \$0.0001        | \$0.13         |
| 8   | 108.29                     | 1.00%        | \$108.94                      | \$1.00                   | \$217.72       | \$108.78        | \$0.16             | \$0.0001        | \$0.13         |
| 9   | 109.37                     | 1.00%        | \$110.12                      | \$1.01                   | \$220.07       | \$109.95        | \$0.17             | \$0.0001        | \$0.13         |
| 10  | 110.46                     | 1.00%        | \$111.30                      | \$1.02                   | \$222.43       | \$111.13        | \$0.17             | \$0.0001        | \$0.13         |
| 11  | 111.57                     | 1.00%        | \$112.50                      | \$1.03                   | \$224.83       | \$112.33        | \$0.17             | \$0.0001        | \$0.13         |
| 12  | 112.68                     | 1.00%        | \$113.71                      | \$1.04                   | \$227.25       | \$113.54        | \$0.17             | \$0.0001        | \$0.14         |
| 13  | 113.81                     | 1.00%        | \$114.93                      | \$1.05                   | \$229.70       | \$114.76        | \$0.17             | \$0.0001        | \$0.14         |
| 14  | 114.95                     | 1.00%        | \$116.17                      | \$1.06                   | \$232.17       | \$116.00        | \$0.18             | \$0.0001        | \$0.14         |
| 15  | 116.10                     | 1.00%        | \$117.42                      | \$1.07                   | \$234.67       | \$117.24        | \$0.18             | \$0.0001        | \$0.14         |
| 16  | 117.26                     | 1.00%        | \$118.69                      | \$1.08                   | \$237.19       | \$118.51        | \$0.18             | \$0.0001        | \$0.14         |
| 17  | 118.43                     | 1.00%        | \$119.96                      | \$1.10                   | \$239.75       | \$119.78        | \$0.18             | \$0.0001        | \$0.14         |
| 18  | 119.61                     | 1.00%        | \$121.26                      | \$1.11                   | \$242.33       | \$121.07        | \$0.18             | \$0.0001        | \$0.15         |
| 19  | 120.81                     | 1.00%        | \$122.56                      | \$1.12                   | \$244.94       | \$122.38        | \$0.19             | \$0.0001        | \$0.15         |
| 20  | 122.02                     | 1.00%        | \$123.88                      | \$1.13                   | \$247.57       | \$123.69        | \$0.19             | \$0.0001        | \$0.15         |
| <b>Total return of the index from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | 22.02%         |
| <b>Total return of the notes from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | 23.73%         |

**Table of Contents****Example 5:**

In part A of this example, the hypothetical closing level of the index increases by 1.00% per quarter in one hypothetical quarter and decreases by 0.99% per quarter in the next hypothetical quarter, alternating for twenty hypothetical quarters. In part B, the hypothetical closing level of the index increases by 3.00% per quarter in one hypothetical quarter and decreases by 2.91% per quarter in the next hypothetical quarter, alternating for twenty hypothetical quarters. In each part, the hypothetical closing level of the index on the final valuation date is approximately unchanged from its level on the inception date. Because the hypothetical closing level of the index on each valuation date is greater than the loss rebalancing trigger, a loss rebalancing event does not occur. This example shows that the performance of the notes will be eroded by volatility due to its effect on the daily investor fees and the rebalancing fees.

**Part A:**

| Quarterly Rebalancing Calculation Date  | Closing Level of the Index | Index Return | Closing Indicative Note Value | Total Daily Investor Fee | Asset Position | Financing Level | Rebalancing Amount | Rebalancing Fee | Settlement Fee |
|---|----------------------------|--------------|-------------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|----------------|
| Inception   | 100.00                     | -            | \$100.00                      | -                        | \$200.00       | \$100.00        | \$0.00             | \$0.0000        | -              |
| 1   | 101.00                     | 1.00%        | \$101.08                      | \$0.92                   | \$202.00       | \$100.92        | \$0.15             | \$0.0001        | \$0.12         |
| 2   | 100.00                     | -0.99%       | \$98.14                       | \$0.93                   | \$200.15       | \$102.01        | (\$3.87)           | \$0.0023        | \$0.12         |
| 3   | 101.00                     | 1.00%        | \$99.20                       | \$0.91                   | \$198.25       | \$99.05         | \$0.15             | \$0.0001        | \$0.12         |
| 4   | 100.00                     | -0.99%       | \$96.32                       | \$0.91                   | \$196.43       | \$100.11        | (\$3.79)           | \$0.0023        | \$0.12         |
| 5   | 101.00                     | 1.00%        | \$97.35                       | \$0.89                   | \$194.56       | \$97.21         | \$0.14             | \$0.0001        | \$0.12         |
| 6   | 100.00                     | -0.99%       | \$94.53                       | \$0.90                   | \$192.78       | \$98.25         | (\$3.72)           | \$0.0022        | \$0.11         |
| 7   | 101.00                     | 1.00%        | \$95.54                       | \$0.87                   | \$190.95       | \$95.40         | \$0.14             | \$0.0001        | \$0.11         |
| 8   | 100.00                     | -0.99%       | \$92.77                       | \$0.88                   | \$189.20       | \$96.42         | (\$3.65)           | \$0.0022        | \$0.11         |
| 9   | 101.00                     | 1.00%        | \$93.77                       | \$0.86                   | \$187.40       | \$93.63         | \$0.14             | \$0.0001        | \$0.11         |
| 10  | 100.00                     | -0.99%       | \$91.05                       | \$0.86                   | \$185.68       | \$94.63         | (\$3.59)           | \$0.0022        | \$0.11         |
| 11  | 101.00                     | 1.00%        | \$92.02                       | \$0.84                   | \$183.91       | \$91.89         | \$0.14             | \$0.0001        | \$0.11         |
| 12  | 100.00                     | -0.99%       | \$89.35                       | \$0.85                   | \$182.23       | \$92.87         | (\$3.52)           | \$0.0021        | \$0.11         |
| 13  | 101.00                     | 1.00%        | \$90.31                       | \$0.83                   | \$180.50       | \$90.18         | \$0.13             | \$0.0001        | \$0.11         |
| 14  | 100.00                     | -0.99%       | \$87.69                       | \$0.83                   | \$178.84       | \$91.15         | (\$3.45)           | \$0.0021        | \$0.11         |
| 15  | 101.00                     | 1.00%        | \$88.64                       | \$0.81                   | \$177.14       | \$88.51         | \$0.13             | \$0.0001        | \$0.11         |
| 16  | 100.00                     | -0.99%       | \$86.06                       | \$0.82                   | \$175.52       | \$89.45         | (\$3.39)           | \$0.0020        | \$0.10         |
| 17  | 101.00                     | 1.00%        | \$86.99                       | \$0.79                   | \$173.85       | \$86.86         | \$0.13             | \$0.0001        | \$0.10         |
| 18  | 100.00                     | -0.99%       | \$84.46                       | \$0.80                   | \$172.25       | \$87.79         | (\$3.33)           | \$0.0020        | \$0.10         |
| 19  | 101.00                     | 1.00%        | \$85.37                       | \$0.78                   | \$170.62       | \$85.25         | \$0.13             | \$0.0001        | \$0.10         |
| 20  | 100.00                     | -0.99%       | \$82.89                       | \$0.79                   | \$169.05       | \$86.16         | (\$3.26)           | \$0.0020        | \$0.10         |
| <b>Total return of the index from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | 0.00%          |
| <b>Total return of the notes from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | -17.21%        |





**Table of Contents****Part B:**

| Quarterly Rebalancing Calculation Date  | Closing Level of the Index | Index Return | Closing Indicative Note Value | Total Daily Investor Fee | Asset Position | Financing Level | Rebalancing Amount | Rebalancing Fee | Settlement Fee |
|---|----------------------------|--------------|-------------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|----------------|
| Inception   | 100.00                     | -            | \$100.00                      | -                        | \$200.00       | \$100.00        | \$0.00             | \$0.0000        | -              |
| 1   | 103.00                     | 3.00%        | \$105.07                      | \$0.93                   | \$206.00       | \$100.93        | \$4.15             | \$0.0025        | \$0.13         |
| 2   | 100.00                     | -2.91%       | \$97.99                       | \$0.97                   | \$204.03       | \$106.04        | (\$8.05)           | \$0.0048        | \$0.12         |
| 3   | 103.00                     | 3.00%        | \$102.96                      | \$0.91                   | \$201.86       | \$98.90         | \$4.06             | \$0.0024        | \$0.12         |
| 4   | 100.01                     | -2.91%       | \$96.02                       | \$0.95                   | \$199.92       | \$103.91        | (\$7.89)           | \$0.0047        | \$0.12         |
| 5   | 103.01                     | 3.00%        | \$100.88                      | \$0.89                   | \$197.79       | \$96.91         | \$3.98             | \$0.0024        | \$0.12         |
| 6   | 100.01                     | -2.91%       | \$94.08                       | \$0.93                   | \$195.90       | \$101.81        | (\$7.73)           | \$0.0046        | \$0.11         |
| 7   | 103.01                     | 3.00%        | \$98.85                       | \$0.87                   | \$193.81       | \$94.96         | \$3.89             | \$0.0023        | \$0.12         |
| 8   | 100.01                     | -2.91%       | \$92.19                       | \$0.91                   | \$191.95       | \$99.76         | (\$7.58)           | \$0.0045        | \$0.11         |
| 9   | 103.01                     | 3.00%        | \$96.86                       | \$0.85                   | \$189.90       | \$93.04         | \$3.82             | \$0.0023        | \$0.12         |
| 10  | 100.01                     | -2.91%       | \$90.33                       | \$0.89                   | \$188.08       | \$97.75         | (\$7.42)           | \$0.0045        | \$0.11         |
| 11  | 103.01                     | 3.00%        | \$94.91                       | \$0.84                   | \$186.08       | \$91.17         | \$3.74             | \$0.0022        | \$0.11         |
| 12  | 100.02                     | -2.91%       | \$88.51                       | \$0.87                   | \$184.29       | \$95.78         | (\$7.28)           | \$0.0044        | \$0.11         |
| 13  | 103.02                     | 3.00%        | \$93.00                       | \$0.82                   | \$182.33       | \$89.33         | \$3.66             | \$0.0022        | \$0.11         |
| 14  | 100.02                     | -2.91%       | \$86.73                       | \$0.86                   | \$180.58       | \$93.86         | (\$7.13)           | \$0.0043        | \$0.10         |
| 15  | 103.02                     | 3.00%        | \$91.12                       | \$0.80                   | \$178.66       | \$87.53         | \$3.59             | \$0.0022        | \$0.11         |
| 16  | 100.02                     | -2.91%       | \$84.98                       | \$0.84                   | \$176.94       | \$91.96         | (\$6.98)           | \$0.0042        | \$0.10         |
| 17  | 103.02                     | 3.00%        | \$89.29                       | \$0.79                   | \$175.06       | \$85.77         | \$3.52             | \$0.0021        | \$0.11         |
| 18  | 100.02                     | -2.91%       | \$83.27                       | \$0.82                   | \$173.38       | \$90.11         | (\$6.84)           | \$0.0041        | \$0.10         |
| 19  | 103.03                     | 3.00%        | \$87.49                       | \$0.77                   | \$171.53       | \$84.04         | \$3.45             | \$0.0021        | \$0.10         |
| 20  | 100.03                     | -2.91%       | \$81.59                       | \$0.81                   | \$169.89       | \$88.30         | (\$6.71)           | \$0.0040        | \$0.10         |
| <b>Total return of the index from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | 0.03%          |
| <b>Total return of the notes from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | -18.51%        |

**Table of Contents****Example 6:**

In this example, the hypothetical closing level of the index decreases by 19.00% during the first hypothetical quarter and increases by 1.13% during each of the following 19 hypothetical quarters. For this example only, we assume that the financing fee rate and the fee rates used in calculating the daily investor fee and the rebalancing fee are all set to zero. Because the hypothetical closing level of the index on each valuation date is greater than the loss rebalancing trigger, a loss rebalancing event does not occur. This example shows that due to the effect of quarterly compounding, a significant negative performance in a single quarter could significantly degrade the performance of the notes.

| Quarterly Rebalancing Calculation Date  | Closing Level of the Index | Index Return | Closing Indicative Note Value | Total Daily Investor Fee | Asset Position | Financing Level | Rebalancing Amount | Rebalancing Fee | Settlement Fee |
|---|----------------------------|--------------|-------------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|----------------|
| Inception   | 100.00                     | -            | \$100.00                      | -                        | \$200.00       | \$100.00        | \$0.00             | \$0.0000        | -              |
| 1   | 81.00                      | -19.00%      | \$62.00                       | \$0.00                   | \$162.00       | \$100.00        | (\$38.00)          | \$0.0000        | \$0.07         |
| 2   | 81.92                      | 1.13%        | \$63.40                       | \$0.00                   | \$125.40       | \$62.00         | \$1.40             | \$0.0000        | \$0.08         |
| 3   | 82.84                      | 1.13%        | \$64.83                       | \$0.00                   | \$128.24       | \$63.40         | \$1.43             | \$0.0000        | \$0.08         |
| 4   | 83.78                      | 1.13%        | \$66.30                       | \$0.00                   | \$131.13       | \$64.83         | \$1.47             | \$0.0000        | \$0.08         |
| 5   | 84.72                      | 1.13%        | \$67.80                       | \$0.00                   | \$134.10       | \$66.30         | \$1.50             | \$0.0000        | \$0.08         |
| 6   | 85.68                      | 1.13%        | \$69.33                       | \$0.00                   | \$137.13       | \$67.80         | \$1.53             | \$0.0000        | \$0.08         |
| 7   | 86.65                      | 1.13%        | \$70.90                       | \$0.00                   | \$140.23       | \$69.33         | \$1.57             | \$0.0000        | \$0.09         |
| 8   | 87.63                      | 1.13%        | \$72.50                       | \$0.00                   | \$143.40       | \$70.90         | \$1.60             | \$0.0000        | \$0.09         |
| 9   | 88.62                      | 1.13%        | \$74.14                       | \$0.00                   | \$146.64       | \$72.50         | \$1.64             | \$0.0000        | \$0.09         |
| 10  | 89.62                      | 1.13%        | \$75.81                       | \$0.00                   | \$149.95       | \$74.14         | \$1.68             | \$0.0000        | \$0.09         |
| 11  | 90.63                      | 1.13%        | \$77.53                       | \$0.00                   | \$153.34       | \$75.81         | \$1.71             | \$0.0000        | \$0.09         |
| 12  | 91.66                      | 1.13%        | \$79.28                       | \$0.00                   | \$156.80       | \$77.53         | \$1.75             | \$0.0000        | \$0.10         |
| 13  | 92.69                      | 1.13%        | \$81.07                       | \$0.00                   | \$160.35       | \$79.28         | \$1.79             | \$0.0000        | \$0.10         |
| 14  | 93.74                      | 1.13%        | \$82.90                       | \$0.00                   | \$163.97       | \$81.07         | \$1.83             | \$0.0000        | \$0.10         |
| 15  | 94.80                      | 1.13%        | \$84.78                       | \$0.00                   | \$167.68       | \$82.90         | \$1.87             | \$0.0000        | \$0.10         |
| 16  | 95.87                      | 1.13%        | \$86.69                       | \$0.00                   | \$171.47       | \$84.78         | \$1.92             | \$0.0000        | \$0.10         |
| 17  | 96.95                      | 1.13%        | \$88.65                       | \$0.00                   | \$175.34       | \$86.69         | \$1.96             | \$0.0000        | \$0.11         |
| 18  | 98.05                      | 1.13%        | \$90.65                       | \$0.00                   | \$179.31       | \$88.65         | \$2.00             | \$0.0000        | \$0.11         |
| 19  | 99.16                      | 1.13%        | \$92.70                       | \$0.00                   | \$183.36       | \$90.65         | \$2.05             | \$0.0000        | \$0.11         |
| 20  | 100.28                     | 1.13%        | \$94.80                       | \$0.00                   | \$187.50       | \$92.70         | \$2.10             | \$0.0000        | \$0.11         |
| <b>Total return of the index from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | 0.28%          |
| <b>Total return of the notes from the inception date to the final valuation date:</b> |                            |              |                               |                          |                |                 |                    |                 | -5.32%         |

**Table of Contents**

**Example 7:**

In this example, the hypothetical closing level of the index decreases by various amounts on the hypothetical valuation dates. Because the hypothetical closing level of the index on each of the sixth and thirteenth hypothetical valuation dates is equal to or less than the loss rebalancing trigger, a loss rebalancing event occurs on such date and the notes are rebalanced on the subsequent valuation date, the loss rebalancing date. This example shows that a loss rebalancing event may occur multiple times throughout the life of the notes and will have the effect of reducing the leveraged exposure of the notes to the index. This example also shows that the leverage factor after the loss rebalancing date will be lower than the leverage factor before the loss rebalancing date.

| Valuation Date | Closing Level of the Index | Index Return | Lowest Intraday Level of the Index | Closing Indicative Note Value | Daily Investor Fee | <i>Before Loss Rebalance</i> |                 | <i>After Loss Rebalance</i> |                 | Rebalancing Amount | Rebalancing Fee | Settlement |
|----------------|----------------------------|--------------|------------------------------------|-------------------------------|--------------------|------------------------------|-----------------|-----------------------------|-----------------|--------------------|-----------------|------------|
|                |                            |              |                                    |                               |                    | Asset Position               | Financing Level | Asset Position              | Financing Level |                    |                 |            |
| 100.00         | -                          | 99.00        | \$100.00                           | -                             | \$200.00           | \$100.00                     |                 |                             |                 |                    |                 |            |
| 96.00          | -4.00%                     | 95.04        | \$91.96                            | \$0.04                        | \$192.00           | \$100.04                     |                 |                             |                 |                    |                 | \$         |
| 91.20          | -5.00%                     | 90.29        | \$82.35                            | \$0.01                        | \$182.40           | \$100.05                     |                 |                             |                 |                    |                 | \$         |
| 87.55          | -4.00%                     | 86.68        | \$75.04                            | \$0.01                        | \$175.10           | \$100.06                     |                 |                             |                 |                    |                 | \$         |
| 84.93          | -3.00%                     | 84.08        | \$69.78                            | \$0.01                        | \$169.85           | \$100.07                     |                 |                             |                 |                    |                 | \$         |
| 81.53          | -4.00%                     | 80.71        | \$62.98                            | \$0.01                        | \$163.06           | \$100.08                     |                 |                             |                 |                    |                 | \$         |
| 77.45          | -5.00%                     | 76.68        | \$54.79                            | \$0.03                        | \$154.90           | \$100.11                     |                 |                             |                 |                    |                 | \$         |
| 73.58          | -5.00%                     | 72.84        | \$47.04                            | \$0.01                        | \$147.16           | \$100.12                     | \$104.11        | \$57.10                     | (\$43.05)       | \$0.0258           |                 | \$         |
| 70.64          | -4.00%                     | 69.93        | \$42.84                            | \$0.01                        | \$99.94            | \$57.10                      |                 |                             |                 |                    |                 | \$         |
| 67.81          | -4.00%                     | 67.13        | \$38.84                            | \$0.01                        | \$95.95            | \$57.11                      |                 |                             |                 |                    |                 | \$         |
| 65.10          | -4.00%                     | 64.45        | \$35.00                            | \$0.01                        | \$92.11            | \$57.11                      |                 |                             |                 |                    |                 | \$         |
| 62.49          | -4.00%                     | 61.87        | \$31.30                            | \$0.02                        | \$88.42            | \$57.13                      |                 |                             |                 |                    |                 | \$         |
| 59.99          | -4.00%                     | 59.39        | \$27.75                            | \$0.01                        | \$84.89            | \$57.13                      |                 |                             |                 |                    |                 | \$         |
| 57.59          | -4.00%                     | 57.02        | \$24.35                            | \$0.01                        | \$81.49            | \$57.14                      |                 |                             |                 |                    |                 | \$         |
| 55.29          | -4.00%                     | 54.74        | \$21.09                            | \$0.01                        | \$78.23            | \$57.15                      | \$46.76         | \$25.69                     | (\$31.48)       | \$0.0189           |                 | \$         |
| 53.08          | -4.00%                     | 52.55        | \$19.19                            | \$0.00                        | \$44.89            | \$25.69                      |                 |                             |                 |                    |                 | \$         |
| 50.96          | -4.00%                     | 50.45        | \$17.39                            | \$0.01                        | \$43.09            | \$25.70                      |                 |                             |                 |                    |                 | \$         |

**Example 8:**

In this example, the hypothetical closing level of the index decreases by various amounts on the hypothetical valuation dates. Because a hypothetical intraday level of the index during the sixth hypothetical valuation date is equal to or less than the automatic redemption trigger, an automatic redemption event occurs on such date. This example shows that an automatic redemption trigger may occur on the same day as a loss rebalancing event. If an automatic redemption event occurs on the same day as a loss rebalancing event, the notes will be automatically redeemed pursuant to the automatic redemption event without giving regard to the rebalancing adjustment. If an automatic redemption event

occurs, the investor receives an amount payable on the notes equal to automatic redemption note value which may be based on the index VWAP level, which will likely be different from the intraday level of the index that triggered the automatic redemption event and from the closing level of the index.

| Closing Day |                                  |              |   |                                     |                       | <i>Before Loss Rebalance</i> |                    | Settle<br>F |
|-------------|----------------------------------|--------------|---|-------------------------------------|-----------------------|------------------------------|--------------------|-------------|
|             | Closing<br>Level of the<br>Index | Index Return | Lowest<br>Intraday<br>Level of the<br>Index | Closing<br>Indicative<br>Note Value | Daily<br>Investor Fee | Asset<br>Position            | Financing<br>Level |             |
| Reception   | 100.00                           | -            | 99.00                                       | \$100.00                            | -                     | \$200.00                     | \$100.00           |             |
| 1           | 96.00                            | -4.00%       | 95.04                                       | \$91.96                             | \$0.04                | \$192.00                     | \$100.04           | \$0         |
| 2           | 91.20                            | -5.00%       | 90.29                                       | \$82.35                             | \$0.01                | \$182.40                     | \$100.05           | \$0         |
| 3           | 87.55                            | -4.00%       | 86.68                                       | \$75.04                             | \$0.01                | \$175.10                     | \$100.06           | \$0         |
| 4           | 84.93                            | -3.00%       | 84.08                                       | \$69.78                             | \$0.01                | \$169.85                     | \$100.07           | \$0         |
| 5           | 81.53                            | -4.00%       | 80.71                                       | \$62.98                             | \$0.01                | \$163.06                     | \$100.08           | \$0         |
| 6           | 77.45                            | -5.00%       | 70.00                                       | \$54.79                             | \$0.03                | \$154.90                     | \$100.11           | \$0         |

S-25

**Table of Contents****Example 9 Calculation of the Leverage Factor Provided by the Notes:**

The example below illustrates the leverage provided by the notes, as measured from the closing level of the index at the time of purchase to the closing level of the index on the immediately following rebalancing date. In the table below, we assume that the hypothetical closing indicative note value is \$100 on the rebalancing date immediately preceding the time of purchase, and the hypothetical closing level of the index is 100 on the rebalancing date immediately preceding the time of purchase. For simplicity, the table disregards the effect of fees and assumes that the price at which the notes can be purchased in the market is equal to their closing indicative note value. If the notes were not purchased at their closing indicative note value, or if fees were taken into account, the leverage factor indicated below would be different.

| Closing Level of the Index | Index Return | Closing Indicative Note Value | Asset Position | Financing Level Ex-Fees | Leverage Factor |
|----------------------------|--------------|-------------------------------|----------------|-------------------------|-----------------|
| 121.00                     | 21.00%       | \$142.00                      | \$242.00       | \$100.00                | 1.70            |
| 120.00                     | 20.00%       | \$140.00                      | \$240.00       | \$100.00                | 1.71            |
| 118.00                     | 18.00%       | \$136.00                      | \$236.00       | \$100.00                | 1.74            |
| 116.00                     | 16.00%       | \$132.00                      | \$232.00       | \$100.00                | 1.76            |
| 114.00                     | 14.00%       | \$128.00                      | \$228.00       | \$100.00                | 1.78            |
| 112.00                     | 12.00%       | \$124.00                      | \$224.00       | \$100.00                | 1.81            |
| 110.00                     | 10.00%       | \$120.00                      | \$220.00       | \$100.00                | 1.83            |
| 108.00                     | 8.00%        | \$116.00                      | \$216.00       | \$100.00                | 1.86            |
| 106.00                     | 6.00%        | \$112.00                      | \$212.00       | \$100.00                | 1.89            |
| 104.00                     | 4.00%        | \$108.00                      | \$208.00       | \$100.00                | 1.93            |
| 102.00                     | 2.00%        | \$104.00                      | \$204.00       | \$100.00                | 1.96            |
| 100.00                     | 0.00%        | \$100.00                      | \$200.00       | \$100.00                | 2.00            |
| 98.00                      | -2.00%       | \$96.00                       | \$196.00       | \$100.00                | 2.04            |
| 96.00                      | -4.00%       | \$92.00                       | \$192.00       | \$100.00                | 2.09            |
| 94.00                      | -6.00%       | \$88.00                       | \$188.00       | \$100.00                | 2.14            |
| 92.00                      | -8.00%       | \$84.00                       | \$184.00       | \$100.00                | 2.19            |
| 90.00                      | -10.00%      | \$80.00                       | \$180.00       | \$100.00                | 2.25            |
| 88.00                      | -12.00%      | \$76.00                       | \$176.00       | \$100.00                | 2.32            |
| 86.00                      | -14.00%      | \$72.00                       | \$172.00       | \$100.00                | 2.39            |
| 84.00                      | -16.00%      | \$68.00                       | \$168.00       | \$100.00                | 2.47            |
| 82.00                      | -18.00%      | \$64.00                       | \$164.00       | \$100.00                | 2.56            |
| 81.00                      | -19.00%      | \$62.00                       | \$162.00       | \$100.00                | 2.61            |
| 80.00                      | -20.00%      | \$60.00                       | \$160.00       | \$100.00                | 2.67            |

The hypothetical closing indicative note values shown above are entirely hypothetical; they are based on levels and returns for the index stocks that may not be achieved on any valuation date and on assumptions that may prove to be erroneous. The actual market value of your notes on the stated maturity date or at any other time, including any time you may wish to sell your notes, may bear little relation to the hypothetical closing indicative note values shown above, and these amounts should not be viewed as an indication of the financial return on an investment in the offered notes. The hypothetical closing indicative note values of the notes held to the stated maturity date in the examples

above assume you purchased your notes at their face amount and have not been adjusted to reflect the actual price you pay for your

S-26

**Table of Contents**

notes. The return on your investment (whether positive or negative) in your notes will be affected by the amount you pay for your notes and the date on which you purchase your notes. If you purchase your notes after the inception date or if you purchase your notes for a price other than the face amount, the return on your investment will differ from, and may be significantly lower than, the hypothetical returns suggested by the above examples. Please read **Additional Risk Factors Specific to Your Notes – The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors** on page S-33.

*We cannot predict the actual closing level of the index or what the market value of your notes will be on any particular valuation date, nor can we predict the relationship between the index level and the market value of your notes at any time prior to the stated maturity date. The actual amount that you will receive at maturity and the rate of return on the offered notes will depend on whether the notes are redeemed and the actual levels of the index on each valuation date determined by the calculation agent as described above. Moreover, the assumptions on which the hypothetical returns are based may turn out to be inaccurate. Consequently, the amount of cash to be paid in respect of your notes at maturity may be very different from the information reflected in the examples above.*

---

**Table of Contents**

**ADDITIONAL RISK FACTORS SPECIFIC TO YOUR NOTES**

*An investment in your notes is subject to the risks described below, as well as the risks and considerations described in the accompanying prospectus and in the accompanying prospectus supplement. You should carefully review these risks and considerations as well as the terms of the notes described herein and in the accompanying prospectus and the accompanying prospectus supplement. Your notes are a riskier investment than ordinary debt securities. Also, your notes are not equivalent to investing directly in the index stocks, i.e., with respect to the index to which your notes are linked, the stocks comprising such index. You should carefully consider whether the offered notes are suited to your particular circumstances.*

**The Notes Are Subject to the Credit Risk of the Issuer and the Guarantor**

Although the return on the notes will be based on the performance of the index, the payment of any amount due on the notes is subject to the credit risk of GS Finance Corp., as issuer of the notes, and the credit risk of The Goldman Sachs Group, Inc., as guarantor of the notes. The notes are our unsecured obligations. Investors are dependent on our ability to pay all amounts due on the notes, and therefore investors are subject to our credit risk and to changes in the market's view of our creditworthiness. Similarly, investors are dependent on the ability of The Goldman Sachs Group, Inc., as guarantor of the notes, to pay all amounts due on the notes, and therefore are also subject to its credit risk and to changes in the market's view of its creditworthiness. See Description of the Notes We May Offer Information About Our Medium-Term Notes, Series E Program How the Notes Rank Against Other Debt on page S-4 of the accompanying prospectus supplement and Description of Debt Securities We May Offer Guarantee by The Goldman Sachs Group, Inc. on page 42 of the accompanying prospectus.

**Your Notes Do Not Bear Interest**

You will not receive any interest payments on your notes. As a result, even if the amounts payable for your notes on a redemption date or the stated maturity date exceeds the face amount of your notes, the overall return you earn on your notes may be less than you would have earned by investing in a non-indexed debt security of comparable maturity that bears interest at a prevailing market rate.

**You May Lose Your Entire Investment in the Notes**

You can lose your entire investment in the notes. The amount payable, if any, on the stated maturity date or on any redemption date will be based on the performance of the Russell 1000® Growth Total Return Index, less applicable fees. If the level of the index steadily declines from the initial valuation date to any redemption date, an automatic redemption event date or the final valuation date, or does not increase sufficiently to offset the negative effect of the applicable fees, the amount payable on your notes will be significantly less than the \$100 face amount and may be zero. Thus, you may lose your entire investment in the notes, which would include any premium to face amount you paid when you purchased the notes.

Also, the market price of your notes prior to a redemption date or the stated maturity date, as the case may be, may be significantly lower than the purchase price you pay for your notes. Consequently, if you sell your notes before the stated maturity date, you may receive far less than the amount of your investment in the notes.

**Regardless of the Performance of the Index, the Amount Payable on Your Notes Will Be Significantly Reduced by the Applicable Fees (Including the Daily Investor Fee and Any Rebalancing Fees) and Any Settlement Fee**



On any valuation date after the initial valuation date, the daily investor fee and any rebalancing fee will significantly reduce the closing indicative note value and, therefore, the amount payable on your notes. In addition, the amount payable on your notes upon redemption at your option or on the stated maturity date will be further reduced by the settlement fee on the applicable redemption valuation date or the final valuation date, as applicable. The daily investor fee accrues on a daily basis throughout the term of the notes, and is calculated based on the asset position each day and the financing level on the preceding rebalancing date. The rebalancing fee is assessed when the exposure of the notes to the index is rebalanced following a loss rebalancing event or a quarterly rebalancing calculation date. A loss rebalancing event may occur multiple times throughout the term of the notes, so a rebalancing fee associated with a loss rebalancing event could be charged multiple times throughout the term of the notes.

As such, the level of the index must increase significantly in order to offset the effect of the daily investor fee, any applicable rebalancing fees and any settlement fee. If the level of the index does not increase sufficiently, the amount payable on your notes may be less than that of a comparable investment in securities with lower fees and costs and may also be less than the face amount of your investment in the notes.

---

**Table of Contents**

**The Daily Investor Fee, Any Applicable Rebalancing Fees and Any Settlement Fee May Be Greater Than the Charges and Fees You May Incur in Connection With an Alternative Investment**

The closing indicative note value and the automatic redemption note value, and therefore the amount payable on your notes, are reduced by the daily investor fee, any applicable rebalancing fees and settlement fee. See **Regardless of the Performance of the Index, the Amount Payable on Your Notes Will Be Significantly Reduced by the Applicable Fees (Including the Daily Investor Fee and Any Rebalancing Fees) and Any Settlement Fee** above for more information regarding the calculation of the daily investor fee, any applicable rebalancing fees and settlement fee. If the daily investor fee, any applicable rebalancing fees and settlement fee are greater than the charges and fees you may have otherwise incurred or accrued in connection with an alternative investment in the index or index stocks over the same term, your return on the notes may be less than your return on such alternative investment.

**The Daily Investor Fee May Be Greater Than Financing Costs That You Would Incur If You Borrowed Funds From a Third Party**

The daily investor fee includes a variable component that seeks to compensate us for, among other things, providing investors with the potential to receive a leveraged participation in movements in the level of the index and is intended to include the financing costs that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index. However, there is no guarantee that the daily investor fee will correspond to the lowest level of financing costs that may be available to you. If the cumulative effect of the daily investor fee exceeds the financing costs and any associated fees you could otherwise incur or accrue from borrowing available funds from a third party for the same time period, your return on the notes may be less than your return on an investment in a different instrument linked to the quarterly compounded performance of the index where you used funds borrowed on more favorable terms from the third party to leverage your investment in such instrument.

**The Notes Are Not Suitable For All Investors and Should Be Purchased Only By Investors Who Understand Leverage Risk and the Consequences of Seeking Quarterly Rebalanced Leveraged Investment Results, and Who Intend to Actively Monitor and Manage Their Investments**

The notes are not suitable for all investors. In particular, the notes entail leverage risk and should be purchased only by investors who understand leverage risk, including the risks inherent in resetting to two times leverage on a quarterly basis, and the consequences of seeking quarterly rebalanced leveraged investment results generally. Investing in the notes is not equivalent to a direct investment in the index because the asset position is reset each quarter, resulting in the compounding of quarterly returns.

The notes are designed to achieve their stated investment objective on a quarterly basis, but their performance can differ significantly from their stated quarterly objective because the relationship between the level of the index and the asset position of the notes will begin to break down as the length of an investor's holding period increases. The notes are not long term substitutes for leveraged long positions in the index stocks.

You should carefully consider whether the notes are appropriate for your investment portfolio. As discussed above, because the notes are meant to provide leveraged exposure to changes in the quarterly closing level of the index, their performance over periods longer than a single quarter can differ significantly from the performance of the index during the same period of time. **Therefore, it is possible that you will suffer significant losses even if the long-term performance of the index is positive. It is possible for the level of the index to increase over time while the market value of the notes declines over time. You should proceed with caution in considering an investment in the notes.**

The notes seek to provide a leveraged return based on the performance of the index (as adjusted for applicable fees and charges). The notes do not attempt to, and should not be expected to, provide returns that reflect leverage on the return of the index for periods longer than a single quarter. The notes rebalance their theoretical exposure on a quarterly basis, increasing exposure in response to that quarter's gains or reducing exposure in response to that quarter's losses.

Quarterly rebalancing will impair the performance of the notes if the index experiences volatility from quarter to quarter and such performance will be dependent on the path of quarterly returns during your holding period. At higher ranges of volatility, there is a significant chance of a complete loss of the value of the notes even if the performance of the index is flat.

The occurrence of loss rebalancing events, if any, will have the effect of increasing the cumulative effect of compounding (as well as incurring additional fees) thereby heightening the possibility of complete loss.

The amount payable on your notes will be contingent upon the quarterly rebalanced leveraged performance of the index during the term of the notes. There is no guarantee that you will receive your initial investment back or any positive return on your investment. Significant adverse quarterly performances for your notes may not be offset by any beneficial quarterly performances of the same magnitude.

---

**Table of Contents**

**Your Notes Will Magnify Any Adverse Movements in the Closing Level of the Index by 2 Times, and, Therefore, are Highly Speculative and Highly Risky**

For every 1% decrease in the closing level of the index from the immediately preceding quarterly rebalancing date, the closing indicative note value will decline by 2% (in addition to any decline due to applicable fees). For example, if the index decreases by 5% from the immediately preceding quarterly rebalancing date, the notes will lose 10% of their value due to the change in the closing level of the index (in addition to any decline due to applicable fees). Accordingly, the notes are highly speculative and are suitable only for investors who understand and can bear the risks associated with 2 times magnified losses resulting from decreases in the closing level of the index.

**Your Notes Are Subject to Automatic Redemption**

If, at any time on any valuation date prior to the final valuation date, the intraday level of the index is equal to or less than the automatic redemption trigger, an automatic redemption event will be deemed to have occurred and the notes will be automatically redeemed (in whole only but not in part) at an amount *equal* to the automatic redemption note value on the automatic redemption event date. Therefore, the term for your notes may be reduced to one day. Upon the occurrence of an automatic redemption event, the notes will be automatically redeemed even if the intraday level of the index is *greater than* to the automatic redemption trigger at any time after the occurrence of the automatic redemption event. On the applicable redemption date, you will receive a payment equal to the automatic redemption note value. Additionally, depending on the time at which the automatic redemption event occurred, the payment on your notes on the redemption date may be based on the index VWAP level, not the closing level of the index on the automatic redemption event date. The index VWAP level accounts for the prices of the index stocks after the occurrence of the automatic redemption event, in some cases during a period on the valuation date immediately following such automatic redemption event date. Because the index VWAP level may be less than the level of the index at the time an automatic redemption event occurs or the closing level of the index on the automatic redemption event date, you may receive less at maturity than if the payment were based on the level of the index at the time the automatic redemption event occurs or based on the closing level of the index on the automatic redemption event date. You will not receive any additional payments after the notes are automatically redeemed and you may not be able to reinvest the proceeds from an investment in the notes at a comparable fee rate for a similar level of risk in the event the notes are automatically redeemed prior to maturity.

**The Occurrence of an Automatic Redemption Event May Adversely Affect the Value of, and the Ability to Sell or Redeem, the Notes**

We will automatically redeem the notes (in whole only but not in part) upon the occurrence of an automatic redemption event. The payment you receive following the redemption of your notes in this situation will likely be significantly less than the face amount of your notes and, if the level of the index and the prices of the index stocks decrease precipitously from the occurrence of the automatic redemption event to the time at which the automatic redemption note value is calculated, may equal \$0. The automatic redemption of the notes upon the occurrence of an automatic redemption event may adversely impact your ability to sell your notes, and/or the price at which you may be able to sell your notes, if any, following the occurrence of an automatic redemption event. Additionally, if we exercise our right to redeem the notes or you elect to have us redeem your notes but an automatic redemption event occurs on or prior to the applicable redemption valuation date, any redemption election will be deemed superseded, and your notes will be automatically redeemed on the relevant redemption date at an amount equal to the automatic redemption note value.

**If an Automatic Redemption Event Occurs, the Payment on the Notes May Be Based on the VWAP Level of the Index, Not to the Closing Level of the Index on the Automatic Redemption Event Date**

Your payment upon an automatic redemption may be based, in part, on the index VWAP level, not the closing level of the index on the automatic redemption event date. The closing level of the index is used to calculate the amount payable under the notes at maturity and upon any other redemption event. The index VWAP level is intended to replicate the proceeds realized from a sale of the index stocks in the quantities in which they comprise the index gradually over the relevant period and will likely differ from the closing level of the index on the automatic redemption event date. Therefore, the payment on the redemption date may be different from the payment you would receive if such payment were determined by reference to the closing level of the index. In addition, the index VWAP level may differ from the level of the index at the time the automatic redemption event occurred.

### **We Are Able to Redeem Your Notes at Our Option**

We will be permitted to redeem your notes at our option. Even if we do not exercise our option to redeem your notes, our ability to do so may adversely affect the value of your notes. It is our sole option whether to redeem your notes prior to maturity and we may or may not exercise this option for any reason. Because of this redemption option, the term for your notes may be reduced to ten days after the inception date.

S-30

**Table of Contents**

**You Cannot Redeem Less Than \$500,000 Face Amount of Your Notes**

If you purchase or at any time own less than \$500,000 face amount of the notes (which is equal to 5,000 notes), you will not be able to have us redeem your notes because each redemption must be in respect of at least \$500,000 face amount of your notes. Your request that we redeem your notes is irrevocable and subject to the notice requirement, which will subject you to market risk in the event the market fluctuates after we receive your request.

**You Will Not Know the Amount Payable on Your Notes at the Time You Request That We Redeem Your Notes and an Automatic Redemption Event Could Cause Your Notice to be Superseded. Additionally, to be Effective, Your Request That We Redeem Your Notes Must be Received Before We Provide Notice of an Issuer Redemption**

You will not know the amount you will receive on the redemption date at the time you request that we redeem your notes. Your notice to us to redeem your notes is irrevocable and must be received by us no later than 3:00 p.m., New York City time, on the applicable valuation date. Provided that the notice of redemption is received by the deadline, the redemption valuation date will be the following valuation date. Therefore, you will not know the amount payable on your notes until the first valuation date after the valuation date on which you provide your notice to us to redeem the notes. As a result, you will be exposed to market risk in the event the market fluctuates after we confirm the validity of your notice of redemption to exercise your rights to have us redeem your notes and prior to the applicable redemption date.

Notwithstanding the above, if you provide notice of holder redemption but an automatic redemption event occurs on or prior to the applicable redemption valuation date, your notice of holder redemption will be superseded and your notes will be automatically redeemed on the redemption date (for the automatic redemption) at an amount equal to the automatic redemption note value. Additionally, if we provide notice of an issuer redemption of the notes, any subsequent notice of holder redemption will not be effective.

**Leverage Increases the Sensitivity of Your Notes to Changes in the Level of the Index**

Because your investment in the notes is leveraged, changes in the level of the index will have a greater impact on the amount payable on your notes than on the amount payable on securities that are not so leveraged. In particular, any decrease in the level of the index will result in a significantly greater decrease in the amount payable on your notes, and you may suffer losses on your investment in the notes substantially greater than you would if your notes did not contain a leverage component.

**If the Closing Indicative Note Value Increases From One Rebalancing Date to the Next, Any Subsequent Decrease in the Closing Level of the Index Will Result in a Larger Decrease in the Closing Indicative Note Value Than if the Current Closing Indicative Note Value Had Remained Constant**

Due to the compounding effect associated with a reset of the leveraged exposure to the index, if the closing indicative note value increases from one rebalancing date to the next, the amount of decrease of the closing indicative note value resulting from a subsequent decrease in the level of the index will increase correspondingly. This is because the subsequent leveraged index performance will be applied to a greater closing indicative note value. As such, the amount of decrease from any decrease in the level of the index will be more than if the closing indicative note value were maintained constant. This means that if the closing indicative note value increases from one rebalancing date to the next as a result of the level of the index increasing by a certain percentage, it will take a smaller percentage decrease in the level of the index to decrease the closing indicative note value (and subsequently the value of your investment) to its value prior to such increase. One consequence is that, if the index increases from rebalancing date 0

to rebalancing date 1 and then decreases to its rebalancing date 0 level on rebalancing date 2, the closing indicative note value will be lower on rebalancing date 2 than it was on rebalancing date 0, even though the closing level of the index is the same on rebalancing date 2 as it was on rebalancing date 0.

**If the Closing Indicative Note Value Decreases From One Rebalancing Date to the Next, Any Subsequent Increase in the Closing Level of the Index Will Result in a Smaller Increase in the Closing Indicative Note Value Than if the Current Closing Indicative Note Value Had Remained Constant**

Due to the compounding effect associated with a reset of the leveraged exposure to the index, if the closing indicative note value decreases from one rebalancing date to the next, the amount of increase of the closing indicative note value resulting from a subsequent increase in the level of the index will decrease correspondingly. This is because the subsequent leveraged index performance will be applied to a smaller closing indicative note value. As such, the amount of increase from any increase in the level of the index will be less than if the closing indicative note value were maintained constant. This means that if the closing indicative note value decreases from one rebalancing date to the next as a result of the level of the index decreasing by a certain percentage, it will take a larger percentage increase in the level of the index to increase the closing indicative note value (and subsequently the value of your investment) to its value prior to such decrease. One consequence is that, if the index decreases from rebalancing date 0 to rebalancing date 1 and then increases to its rebalancing date 0 level on rebalancing date 2, the closing indicative note value will be lower on rebalancing date 2 than it was on rebalancing date 0, even though the closing level of the index is the same on rebalancing date 2 as it was on rebalancing date 0.

## **Table of Contents**

### **The Ratio Between the Value of Your Notes and the Exposure of Each Note to the Index Will Fluctuate During the Term of Your Notes**

Your notes do not incorporate a daily reset mechanism that regularly adjusts the exposure to the performance of the index in order to achieve a fixed daily multiple of index percentage returns.

After each quarterly rebalancing calculation date, the leverage to which investors will be exposed is unlikely to be two times the performance of the index. As the level of the index increases or decreases after the quarterly rebalancing calculation date, the leverage exposure will vary. If you purchase the notes at a point in time when the level of the index has increased as compared to the immediately preceding rebalancing date, you will be exposed to less than two times the positive performance of the index (before accounting for applicable fees). If the level of the index decreases as compared to the closing level of the index on the immediately preceding rebalancing date, you will be exposed to more than two times the negative performance of the index (before accounting for applicable fees). Such increased or decreased exposure will last until the next quarterly rebalancing calculation date. The occurrence of loss rebalancing events, if any, will have the effect of significantly decreasing the asset position (as well as incurring additional fees) thereby heightening the possibility of a large deviation from the target of two times the quarterly index performance. Consequently, both on any given day and over longer periods, your investment in the notes may underperform compared to a comparable investment where the daily return tracks a multiple equal to the initial leverage factor of two times the performance of the index.

### **Unlike Certain Leveraged Exchange Traded Funds, Your Notes Do Not Include a Daily Reset Mechanism, and the Performance of the Notes Reflects a Return Compounded on a Quarterly Basis**

Your notes operate differently than certain leveraged exchange traded funds (ETFs) that have a daily reset mechanism that seeks to provide investors in such ETFs a return based on a fixed multiple of the performance of an index on a given day. The reset mechanism of such ETFs is applied so that the return on investments in such ETFs will correspond to a fixed multiple (e.g., three times) of the daily return on the index on any given day, before fees and expenses.

Your notes do not operate in this manner, as they do not have a daily reset mechanism. Instead, the notes rebalance their theoretical exposure on a quarterly basis, increasing exposure in response to that quarter's gains or reducing exposure in response to that quarter's losses. As a consequence, the returns on the performance of the index are compounded on a quarterly basis.

Quarterly rebalancing will impair the performance of the notes if the index experiences volatility from quarter to quarter and such performance will be dependent on the path of quarterly returns during the holder's holding period. At higher ranges of volatility, there is a significant chance of a complete loss of the value of the notes even if the performance of the index is flat.

In addition, the occurrence of loss rebalancing events, if any, will have the effect of deleveraging the exposure of the notes to the index. This feature acts to reset the leveraged exposure to the index to approximately 2 on the relevant rebalancing date (without accounting for changes in the index level on the rebalancing date). See [Upon the Occurrence of a Loss Rebalancing Event, the Leveraged Exposure of the Notes to the Performance of the Index Will Be Reduced below](#).

Finally, daily resetting generates more positive total returns in periods of steady positive index performance. Therefore, during such a period, and ignoring the difference in fees, a daily resetting ETF referencing the index will likely outperform your notes.



**Upon the Occurrence of a Loss Rebalancing Event, the Leveraged Exposure of the Notes to the Quarterly Performance of the Index Will Be Reduced**

A loss rebalancing event, which may occur multiple times throughout the term of the notes, will have the effect of reducing the leveraged exposure of the notes to the index with the aim of resetting the leveraged exposure to the index to approximately 2 on the relevant rebalancing date (without accounting for changes in the index level on the rebalancing date). This means that after the rebalancing date following each loss rebalancing event, a constant percentage increase in the index level will have a lesser positive effect on the value of the notes relative to before such loss rebalancing date. This effect may be magnified if multiple loss rebalancing events occur. In addition, each time a loss rebalancing event occurs, a rebalancing fee *equal* to 0.06% of the absolute value of the relevant rebalancing amount (which represents the change in the exposure to the index as a result of a rebalancing event) will be added to the financing level, which will have the effect of reducing the closing indicative note value and, therefore, the value of the notes at maturity or upon redemption.

S-32

**Table of Contents****The Intraday Indicative Note Value Is Not the Same as Any Trading Price of the Notes in the Secondary Market. Similarly, the Closing Indicative Note Value Is Not the Same As the Closing Price of the Notes Or Any Trading Price of the Notes in the Secondary Market**

The intraday indicative note value is not the same as any trading price of the notes in the secondary market. Similarly, the closing indicative note value is not the same as the closing price of the notes or any trading price of the notes in the secondary market. The closing indicative note value and intraday indicative note value on each day following the initial valuation date are intended to approximate the intrinsic economic value of the notes at the time of calculation. The closing indicative note value is equal to (i) the asset position (\$200 on the inception date which will increase or decrease depending on the index performance), *minus* (ii) the financing level (\$100 on the inception date which will increase due to the daily investor fee and will increase or decrease on each rebalancing date based on the index performance since the last rebalancing date). By contrast, a trading price for the notes at any time is the price at which you may be able to sell your notes in the secondary market at such time, if one exists. A trading price for the notes at any time may vary significantly from the closing indicative note value or intraday indicative note value at such time. Paying a premium purchase price over the closing indicative note value or intraday indicative note value could lead to significant losses in the event you sell your notes at a time when such premium is no longer present in the marketplace or such notes are redeemed, in which case you will receive a cash payment in an amount based on the closing indicative note value. You should consult your financial advisor before purchasing or selling the notes, especially if the notes are trading at a premium over their closing indicative value.

**The Traded Prices of Your Notes At Any Time Will Reflect Many Factors and Cannot Be Predicted**

If GS&Co. buys or sells your notes (if GS&Co. makes a market, which it is not obligated to do), it will do so at prices that reflect factors such as the intraday indicative note value or the closing indicative note value at that time, its then current bid and ask spread for similar sized trades of structured notes (adjusted for the then current liquidity of the notes), any premium or discount that may have developed due to imbalances in the demand and supply of the notes, and other factors discussed in [The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors](#), including our creditworthiness and the creditworthiness of The Goldman Sachs Group, Inc. The traded prices of your notes at any time will reflect many factors and cannot be predicted. The intraday indicative note value and the closing indicative note value do not incorporate any market parameters other than the index performance nor do they account for future fees that will accrue during the expected term of your investment in the notes and are not the same as any trading price of the notes in the secondary market.

If you sell your notes, you will likely be charged a commission for secondary market transactions, or the price will likely reflect a dealer discount. This commission or discount will further reduce the proceeds you would receive for your notes in a secondary market sale.

There is no assurance that GS&Co. or any other party will be willing to purchase your notes at any price and, in this regard, GS&Co. is not obligated to make a market in the notes. See [Your Notes May Not Have an Active Trading Market and May Not Continue to be Listed Over the Life of Your Notes](#) below.

**Any Limitation or Suspension on the Issuance or Sale of the Notes May Impact the Trading Price of the Notes, Including By Creating a Premium Over the Indicative Value of the Notes That May Be Reduced or Eliminated At Any Time**

Because our obligations under the notes are hedged through one or more of our affiliates, increases in the number of notes outstanding create corresponding increases in our exposure to the securities included in the index. In order to manage the risk of this exposure, we may impose a limitation or suspension on the number of notes to be issued. Any

limitation or suspension on the issuance of the notes may materially and adversely affect the price and liquidity of the notes in the secondary market. Alternatively, the decrease in supply may cause an imbalance in the market supply and demand, which may cause the notes to trade at a premium over the indicative value of the notes. In addition, any decrease in the supply of the notes due to any limitation or suspension on issuance may cause the notes to appear on NYSE Arca's threshold securities list, indicating repeated delivery failure (which may be a sign of supply shortage) and requiring an actual borrowing of or a bona fide arrangement to borrow the notes in connection with a short sale. If arbitrageurs are unable to locate notes to sell short, the notes may trade at a premium, which may be significant, in relation to their indicative value.

Any premium may be reduced or eliminated at any time. Paying a premium purchase price over the closing indicative value of the notes could lead to significant losses in the event the investor sells such notes at a time when such premium is no longer present in the marketplace or such notes are redeemed, including at our option, which we have the discretion to do at any time. If we redeem the notes at our option, investors will receive a cash payment equal to the closing indicative note value, which will not include any premium. Investors should consult their financial advisors before purchasing or selling the notes, especially notes trading at a premium over their closing indicative value.

S-33

**Table of Contents**

**The Liquidity of the Market for the Offered Notes May Vary Materially From Time to Time**

We intend to sell the aggregate face amount of the eleventh reopened notes on the original issue date to GS&Co., our affiliate, which will sell the eleventh reopened notes from time to time. Also, the aggregate face amount of the notes outstanding could be reduced at any time by redemptions. Accordingly, the liquidity of the market for your notes could vary materially over the life of the notes. While you may elect to redeem your notes prior to maturity, any redemption will be subject to the conditions and procedures described elsewhere in this prospectus supplement, including the condition that you must redeem at least \$500,000 face amount of the notes at one time in order to exercise your right to redeem your notes.

**We and GS&Co. Are Under No Obligation to Issue or Sell Additional Notes at Any Time, and If We and GS&Co. Do Sell Additional Notes, We May Limit or Restrict Such Sales, and We and GS&Co. May Stop and Subsequently Resume Selling Additional Notes At Any Time**

In our sole discretion, we may decide to reopen the offered notes and issue and sell such additional notes from time to time to GS&Co., and in GS&Co.'s sole discretion, it may decide to sell additional notes to investors or to dealers. However, we and GS&Co. are under no obligation to issue or sell additional notes at any time, and if we and GS&Co. do issue and sell additional notes, we or GS&Co. may limit or restrict such sales, and we or GS&Co. may stop and subsequently resume selling additional notes at any time. If we and GS&Co. start selling additional notes, we or GS&Co. may stop selling additional notes for any reason, which could materially and adversely affect the price and liquidity of the notes in the secondary market.

Unless we indicate otherwise, if we or GS&Co. suspend selling additional notes, we and GS&Co. reserve the right to resume selling additional notes at any time, which might result in the reduction or elimination of any premium in the trading price that may have developed. Before trading in the secondary market, you should compare the closing indicative note value and intraday indicative note value with the then-prevailing trading price of the notes. Any premium may be reduced or eliminated at any time.

Suspension of additional issuances of the notes can also result in a significant reduction in the number of outstanding notes, if investors subsequently exercise their right to have the notes redeemed by us. If the total number of outstanding notes has fallen to a level that is close to or below the minimum redemption amount, you may not be able to purchase enough notes to meet the minimum size requirement in order to exercise your early redemption right. The unavailability of the early redemption right can result in the notes trading in the secondary market at discounted prices below the intraday indicative note value. Having to sell your notes at a discounted sale price below the intraday indicative note value could lead to significant losses. Prior to making an investment in the notes, you should take into account whether or not the trading price is tracking the intraday indicative note value.

**The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors**

When we refer to the market value of your notes, we mean the value that you could receive for your notes if you chose to sell them in the open market before the stated maturity date. A number of factors, many of which are beyond our control, will likely influence the market value of your notes, including:

supply and demand for the notes, including inventory positions with GS&Co. or any market-maker;

the accrued fees, which are affected by 3-month USD LIBOR and the levels of the index since the inception date;

the levels of the index;

economic, financial, regulatory, political, military and other events that affect stock markets generally and the index stocks, and which may affect the closing level of the index;

the availability of substitute financial products that provide similar exposure to the index but with lower fees; and

our creditworthiness and the creditworthiness of The Goldman Sachs Group, Inc., whether actual or perceived, and including actual or anticipated upgrades or downgrades in our credit ratings or the credit ratings of The Goldman Sachs Group, Inc. or changes in other credit measures.

These factors, and many other factors, will influence the price you will receive if you sell your notes before maturity, including the price you may receive for your notes in any market making transaction.

You cannot predict the future performance of the index based on its historical performance. The actual performance of the index over the life of the offered notes, as well as the amount payable at maturity or upon redemption, as the case may be, may bear little or no relation to the historical closing levels of the index or to the hypothetical examples shown elsewhere in this prospectus supplement.

---

**Table of Contents**

**If You Purchase Your Notes at a Premium to Face Amount, the Return on Your Investment Will Be Lower Than the Return on Notes Purchased at Face Amount and the Impact of Certain Key Terms of the Notes Will Be Negatively Affected**

The amount you will be paid for your notes upon redemption or on the stated maturity date will not be adjusted based on the issue price you pay for the notes. If you purchase notes at a price that differs from the face amount of the notes, then the return on your investment in such notes held to a redemption date or the stated maturity date will differ from, and may be substantially less than, the return on notes purchased at face amount. If you purchase your notes at a premium to face amount and hold them to a redemption date or the stated maturity date, the return on your investment in the notes will be lower than it would have been had you purchased the notes at face amount or a discount to face amount.

**If the Level of the Index Changes, the Market Value of Your Notes May Not Change in the Same Manner**

The price of your notes may move differently than the performance of the index. Changes in the level of the index may not result in a comparable change in the market value of your notes. Even if the closing level of the index is greater than or equal to the index level on the initial valuation date during some portion of the life of the notes, the market value of your notes may not reflect this. We discuss some of the reasons for this disparity under [The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors](#) above.

**Your Notes May Not Have an Active Trading Market and May Not Continue to be Listed Over the Life of Your Notes**

Although the offered notes are listed on NYSE Arca, there is no assurance that a secondary market for the offered notes will develop. GS&Co. or its affiliates may engage in limited purchase and resale transactions in the offered notes, although they are not required to do so. If they decide to engage in such transactions, they may stop at any time.

No assurance can be given as to the continuation of the listing for the life of the offered notes, or the liquidity or trading market for the offered notes. We are not required to maintain any listing of your notes on NYSE Arca.

**The Exchange May Halt Trading in the Notes or May Limit the Extent to Which Trading Prices May Change Within Specified Time Periods, Which in Either Case Would Adversely Impact Investors' Ability to Sell the Notes**

Trading in the notes may be halted due to market conditions or, in light of the exchange's rules and procedures, for reasons that, in the view of the exchange, make trading in the notes inadvisable. General exchange trading is subject to trading halts caused by extraordinary market volatility pursuant to circuit breaker rules based on a specified decline in a market index (e.g., the S&P 500<sup>®</sup> Index). In addition, the notes may be subject to limit up and limit down rules or trading pause requirements that are triggered by a significant change in the trading price of those notes within a specified period of time. These limit up and limit down and trading pause rules, if triggered, could prevent investors from transacting at then-prevailing intraday indicative note values or at all. If the level of the index declines precipitously during the trading day, triggering a limit down mechanism or trading pause, you may be unable to sell your notes for some period of time, either because no trading at all is permitted or because the price that any purchaser would be willing to pay for them at the time may be significantly below the lowest price that a purchaser would be permitted to pay for them on the exchange. In that circumstance, by the time you are finally able to sell your notes, you may have incurred significantly greater losses than you would have incurred had you been able to sell them when you initially wanted to. Additionally, the ability to short sell notes may be restricted when there is a 10% or greater change from the previous day's official closing price. Exchange rules relating to these matters are subject to change

from time to time.

**We May Sell an Additional Aggregate Face Amount of the Notes at a Different Issue Price**

At our sole option, we may decide to sell an additional aggregate face amount of the notes subsequent to the date of this prospectus supplement. The issue price of the notes in the subsequent sale may differ substantially (higher or lower) from the issue price you paid as provided on the cover of this prospectus supplement.

**We Have No Obligation to Issue Additional Notes, and We May Cease or Suspend Sales of the Notes**

We have the right, but not the obligation, to issue additional notes once the initial distribution is complete. We also reserve the right to cease or suspend sales of the notes from inventory held at any time after the initial valuation date.

Any limitation or suspension on the issuance or sale of the notes may materially and adversely affect the price and liquidity of the notes in the secondary market. Alternatively, the decrease in supply may cause an imbalance in the market supply and demand, which may cause the notes to trade at a premium over their indicative value. Any premium may be reduced or eliminated at any time. Paying a premium purchase price over the closing indicative note value of the notes could lead to significant losses in the event you sell your notes at a time when such premium is no longer present in the marketplace or if we redeem the notes at are upon or automatically. Investors should consult their financial advisors before purchasing or selling the notes, especially notes trading at a premium over their closing indicative note value. See [Description of the Notes We May Offer](#) [Information About Our Medium-Term Notes, Series E Program](#) [Amounts That We May Issue](#) on page S-4 of the accompanying prospectus supplement.

---

**Table of Contents****U.K. Regulators Will No Longer Persuade or Compel Banks to Submit Rates for Calculation of LIBOR After 2021; Interest Rate Benchmark May Be Discontinued**

On July 27, 2017, the Chief Executive of the U.K. Financial Conduct Authority (FCA), which regulates LIBOR, announced that the FCA will no longer persuade or compel banks to submit rates for the calculation of LIBOR (which includes the 3-month USD LIBOR rate) after 2021. Such announcement indicates that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. Notwithstanding the foregoing, it appears highly likely that LIBOR will be discontinued or modified by 2021. It is not possible to predict the effect that this announcement or any such discontinuance or modification will have on the 3-month USD LIBOR rate or your notes. If the calculation agent determines, on any day that 3-month USD LIBOR is scheduled to be determined under the terms of the notes, that 3-month USD LIBOR 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 3-month USD LIBOR, 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 valuation dates 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 3-month USD LIBOR rate, in a manner that is consistent with industry-accepted practices for such substitute or successor rate. See [Summary Information](#) [Key Terms](#) [Discontinuance of 3-month USD LIBOR](#) above.

**Regulation and Reform of Benchmarks, Including LIBOR and Other Types of Benchmarks, May Cause such Benchmarks to Perform Differently Than in the Past, or to Disappear Entirely, or Have Other Consequences Which Cannot be Predicted**

LIBOR and other interest rate, equity, foreign exchange rate and other types of indices which are deemed to be benchmarks are the subject of recent national, international and other regulatory guidance and proposals for reform.

Some of these reforms are already effective while others are still to be implemented. These reforms may cause such benchmarks to perform differently than in the past, or to disappear entirely, or have other consequences which cannot be predicted. Any such consequence could have a material adverse effect on your notes.

Any of the international, national or other proposals for reform or the general increased regulatory scrutiny of benchmarks could increase the costs and risks of administering or otherwise participating in the setting of a benchmark and complying with any such regulations or requirements. Such factors may have the effect of discouraging market participants from continuing to administer or contribute to certain benchmarks, trigger changes in the rules or methodologies used in certain benchmarks or lead to the disappearance of certain benchmarks. The disappearance of a benchmark or changes in the manner of administration of a benchmark could result in discretionary valuation by the index sponsor (including any index calculation agent acting on the index sponsor's behalf) or the note calculation agent or other consequence in relation to your notes. Any such consequence could have a material adverse effect on the value of and return on your notes.

**The Daily Investor Fee is Based, In Part, On the 3-Month USD LIBOR Rate, Which is a Floating Rate That May Increase Significantly During the Term of the Notes**

The amount payable on your notes will be reduced by the daily investor fee, which has the effect of reducing the closing indicative note value. The daily investor fee is based, in part, on the 3-month USD LIBOR rate, which is a floating rate that fluctuates continuously. As a result, if the 3-month USD LIBOR rate increases during the term of the notes, the daily investor fee will also increase, which will reduce the amount payable on your notes and may adversely



affect the market value of your notes.

**The Historical Levels of the 3-Month USD LIBOR Rate Are Not an Indication of the Future Levels of the 3-Month USD LIBOR Rate**

In the past, the level of the 3-month USD LIBOR rate has experienced significant fluctuations. You should note that historical levels, fluctuations and trends of the 3-month USD LIBOR rate are not necessarily indicative of future levels. Any historical upward or downward trend in the 3-month USD LIBOR rate is not an indication that the 3-month USD LIBOR rate is more or less likely to increase or decrease at any time during an interest period, and you should not take the historical levels of the 3-month USD LIBOR rate as an indication of its future performance.

S-36

---

**Table of Contents**

**Anticipated Hedging Activities by Goldman Sachs or Our Distributors May Negatively Impact Investors in the Notes and Cause Our Interests and Those of Our Clients and Counterparties to be Contrary to Those of Investors in the Notes**

Goldman Sachs expects to hedge our obligations under the notes by purchasing listed or over-the-counter options, futures and/or other instruments linked to the index. Goldman Sachs also expects to adjust the hedge by, among other things, purchasing or selling any of the foregoing, and perhaps other instruments linked to the index or the index stocks, at any time and from time to time, and to unwind the hedge by selling any of the foregoing on or before the final valuation date for your notes. Alternatively, Goldman Sachs may hedge all or part of our obligations under the notes with unaffiliated distributors of the notes which we expect will undertake similar market activity. Goldman Sachs may also enter into, adjust and unwind hedging transactions relating to other index-linked notes whose returns are linked to changes in the level of the index or the index stocks, as applicable.

In addition to entering into such transactions itself, or distributors entering into such transactions, Goldman Sachs may structure such transactions for its clients or counterparties, or otherwise advise or assist clients or counterparties in entering into such transactions. These activities may be undertaken to achieve a variety of objectives, including: permitting other purchasers of the notes or other securities to hedge their investment in whole or in part; facilitating transactions for other clients or counterparties that may have business objectives or investment strategies that are inconsistent with or contrary to those of investors in the notes; hedging the exposure of Goldman Sachs to the notes including any interest in the notes that it reacquires or retains as part of the offering process, through its market-making activities or otherwise; enabling Goldman Sachs to comply with its internal risk limits or otherwise manage firmwide, business unit or product risk; and/or enabling Goldman Sachs to take directional views as to relevant markets on behalf of itself or its clients or counterparties that are inconsistent with or contrary to the views and objectives of the investors in the notes.

Any of these hedging or other activities may adversely affect the level of the index directly or indirectly by affecting the price of the index stocks and therefore the market value of your notes and the amount we will pay on your notes, if any. In addition, you should expect that these transactions will cause Goldman Sachs or its clients, counterparties or distributors to have economic interests and incentives that do not align with, and that may be directly contrary to, those of an investor in the notes. Neither Goldman Sachs nor any distributor will have any obligation to take, refrain from taking or cease taking any action with respect to these transactions based on the potential effect on an investor in the notes, and may receive substantial returns on hedging or other activities while the value of your notes declines. In addition, if the distributor from which you purchase notes is to conduct hedging activities in connection with the notes, that distributor may otherwise profit in connection with such hedging activities and such profit, if any, will be in addition to the compensation that the distributor receives for the sale of the notes to you. You should be aware that the potential to earn fees in connection with hedging activities may create a further incentive for the distributor to sell the notes to you in addition to the compensation they would receive for the sale of the notes.

**Goldman Sachs Trading and Investment Activities for its Own Account or for its Clients Could Negatively Impact Investors in the Notes**

Goldman Sachs is a global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals. As such, it acts as an investor, investment banker, research provider, investment manager, investment advisor, market maker, trader, prime broker and lender. In those and other capacities, Goldman Sachs purchases, sells or holds a broad array of investments, actively trades securities, derivatives, loans, commodities, currencies, credit default swaps, indices, baskets and other financial instruments and products for its own account or for the accounts of its customers, and will have other direct or indirect interests, in the global fixed

income, currency, commodity, equity, bank loan and other markets. Any of Goldman Sachs' financial market activities may, individually or in the aggregate, have an adverse effect on the market for your notes, and you should expect that the interests of Goldman Sachs or its clients or counterparties will at times be adverse to those of investors in the notes.

Goldman Sachs regularly offers a wide array of securities, financial instruments and other products into the marketplace, including existing or new products that are similar to your notes, or similar or linked to the index or index stocks. Investors in the notes should expect that Goldman Sachs will offer securities, financial instruments, and other products that will compete with the notes for liquidity, research coverage or otherwise.

**Goldman Sachs' Market-Making Activities Could Negatively Impact Investors in the Notes**

Goldman Sachs actively makes markets in and trades financial instruments for its own account and for the accounts of customers. These financial instruments include debt and equity securities, currencies, commodities, bank loans, indices, baskets and other products. Goldman Sachs' activities include, among other things, executing large block trades and taking long and short positions directly and indirectly, through derivative instruments or otherwise. The securities and instruments in which Goldman Sachs takes positions, or expects to take positions, include securities and instruments of

## **Table of Contents**

the index or index stocks, securities and instruments similar to or linked to the foregoing or the currencies in which they are denominated. Market making is an activity where Goldman Sachs buys and sells on behalf of customers, or for its own account, to satisfy the expected demand of customers. By its nature, market making involves facilitating transactions among market participants that have differing views of securities and instruments. As a result, you should expect that Goldman Sachs will take positions that are inconsistent with, or adverse to, the investment objectives of investors in the notes.

If Goldman Sachs becomes a holder of any securities of the index or index stocks in its capacity as a market-maker or otherwise, any actions that it takes in its capacity as security holder, including voting or provision of consents, will not necessarily be aligned with, and may be inconsistent with, the interests of investors in the notes.

### **You Should Expect That Goldman Sachs Personnel Will Take Research Positions, or Otherwise Make Recommendations, Provide Investment Advice or Market Color or Encourage Trading Strategies That Might Negatively Impact Investors in the Notes**

Goldman Sachs and its personnel, including its sales and trading, investment research and investment management personnel, regularly make investment recommendations, provide market color or trading ideas, or publish or express independent views in respect of a wide range of markets, issuers, securities and instruments. They regularly implement, or recommend to clients that they implement, various investment strategies relating to these markets, issuers, securities and instruments. These strategies include, for example, buying or selling credit protection against a default or other event involving an issuer or financial instrument. Any of these recommendations and views may be negative with respect to the index or index stocks or other securities or instruments similar to or linked to the foregoing or result in trading strategies that have a negative impact on the market for any such securities or instruments, particularly in illiquid markets. In addition, you should expect that personnel in the trading and investing businesses of Goldman Sachs will have or develop independent views of the index or index stocks, the relevant industry or other market trends, which may not be aligned with the views and objectives of investors in the notes.

### **Goldman Sachs Regularly Provides Services to, or Otherwise Has Business Relationships with, a Broad Client Base, Which May Include the Sponsor of the Index or the Issuers of the Index Stocks or Other Entities That Are Involved in the Transaction**

Goldman Sachs regularly provides financial advisory, investment advisory and transactional services to a substantial and diversified client base, and you should assume that Goldman Sachs will, at present or in the future, provide such services or otherwise engage in transactions with, among others, the sponsor of the index or the issuers of the index stocks, or transact in securities or instruments or with parties that are directly or indirectly related to the foregoing. These services could include making loans to or equity investments in those companies, providing financial advisory or other investment banking services, or issuing research reports. You should expect that Goldman Sachs, in providing such services, engaging in such transactions, or acting for its own account, may take actions that have direct or indirect effects on the index or index stocks, as applicable, and that such actions could be adverse to the interests of investors in the notes. In addition, in connection with these activities, certain Goldman Sachs personnel may have access to confidential material non-public information about these parties that would not be disclosed to Goldman Sachs employees that were not working on such transactions as Goldman Sachs has established internal information barriers that are designed to preserve the confidentiality of non-public information. Therefore, any such confidential material non-public information would not be shared with Goldman Sachs employees involved in structuring, selling or making markets in the notes or with investors in the notes.

In this offering, as well as in all other circumstances in which Goldman Sachs receives any fees or other compensation in any form relating to services provided to or transactions with any other party, no accounting, offset or payment in

respect of the notes will be required or made; Goldman Sachs will be entitled to retain all such fees and other amounts, and no fees or other compensation payable by any party or indirectly by holders of the notes will be reduced by reason of receipt by Goldman Sachs of any such other fees or other amounts.

**The Offering of the Notes May Reduce an Existing Exposure of Goldman Sachs or Facilitate a Transaction or Position That Serves the Objectives of Goldman Sachs or Other Parties**

A completed offering may reduce Goldman Sachs' existing exposure to the index or index stocks, securities and instruments similar to or linked to the foregoing or the currencies in which they are denominated, including exposure gained through hedging transactions in anticipation of this offering. An offering of notes will effectively transfer a portion of Goldman Sachs' exposure (and indirectly transfer the exposure of Goldman Sachs' hedging or other counterparties) to investors in the notes.

The terms of the offering (including the selection of the index or index stocks, and the establishment of other transaction terms) may have been selected in order to serve the investment or other objectives of Goldman Sachs or another client or counterparty of Goldman Sachs. In such a case, Goldman Sachs would typically receive the input of other parties that are involved in or otherwise have an interest in the offering, transactions hedged by the offering, or related transactions. The incentives of these other parties would normally differ from and in many cases be contrary to those of investors in the notes.

**Table of Contents**

**Other Investors in the Notes May Not Have the Same Interests as You**

Other investors in the notes are not required to take into account the interests of any other investor in exercising remedies or voting or other rights in their capacity as securityholders or in making requests or recommendations to Goldman Sachs as to the establishment of other transaction terms. The interests of other investors may, in some circumstances, be adverse to your interests. For example, certain investors may take short positions (directly or indirectly through derivative transactions) on assets that are the same or similar to your notes, index, index stocks or other similar securities, which may adversely impact the market for or value of your notes.

**The Policies of the Index Sponsor and Changes that Affect the Index or the Index Stocks Comprising the Index, Could Affect the Amount Payable on Your Notes and the Market Value of Your Notes**

The policies of the index sponsor concerning the calculation of the level of the index, additions, deletions or substitutions of the index stocks comprising the index, and the manner in which changes affecting such index stocks or their issuers, such as stock dividends, reorganizations or mergers, are reflected in the index level, could affect the level of the index and, therefore, the amount payable on your notes and the market value of your notes before that date. The amount payable on your notes, if any, and their market value could also be affected if the index sponsor changes these policies, for example, by changing the manner in which it calculates the index level or the method by which it constructs the index, or if the index sponsor discontinues or suspends calculation or publication of the index level, in which case it may become difficult to determine the market value of your notes. If events such as these occur, the calculation agent which initially will be GS&Co., our affiliate may determine the index level on any such date and thus the amount payable on your notes, if any in a manner it considers appropriate, in its sole discretion. We describe the discretion that the calculation agent will have in determining the index level on any valuation date or the final valuation date and the amount payable on your notes, if any, more fully under Specific Terms of Your Notes Discontinuance or Modification of the Index and Role of Calculation Agent below.

**You Have No Shareholder Rights or Rights to Receive Any Index Stock**

Investing in your notes will not make you a holder of any of the index stocks. Neither you nor any other holder or owner of your notes will have any rights with respect to the index stocks, including any voting rights, any rights to receive dividends or other distributions, any rights to make a claim against the index stocks or any other rights of a holder of the index stocks. Your notes will be paid in cash, and you will have no right to receive delivery of any index stocks.

**Past Index Performance is No Guide to Future Performance**

The actual performance of the index over the life of the notes, as well as the amount payable on your notes, if any, may bear little relation to the historical closing levels of the index or to the hypothetical examples set forth elsewhere in this prospectus supplement. We cannot predict the future performance of the index.

**There Is No Affiliation Between the Index Stock Issuers or the Index Sponsor and Us**

We are not affiliated with the issuer of the index stocks or the index sponsor. As we have told you above, however, we or our affiliates may currently or from time to time in the future own securities of, or engage in business with, the index sponsor or the index stock issuers. Neither we nor any of our affiliates have participated in the preparation of any publicly available information or made any due diligence investigation or inquiry with respect to the index or any of the index stock issuers. You, as an investor in your notes, should make your own investigation into the index and the index stock issuers. See The Index below for additional information about the index.

Neither the index sponsor nor any of the index stock issuers are involved in the offering of your notes in any way and none of them have any obligation of any sort with respect to your notes. Thus, neither the index sponsor nor any of the index stock issuers have any obligation to take your interests into consideration for any reason, including in taking any corporate actions that might affect the market value of your notes.

**There Is No Guarantee That the Index Methodology Will Be Successful**

The index is designed to track the large- and mid-capitalization segment of the U.S. equity market and is predominantly comprised of growth stocks, meaning stocks issued by companies whose earnings are expected to grow at an above-average rate relative to the market. There is no guarantee that the index will outperform any other index or strategy that tracks the large- and mid-capitalization segment of the U.S. equity market using other criteria. Companies that are considered to be growth oriented may not achieve higher revenue growth relative to comparable companies, which may cause the level of the index to decrease over the term of the notes. Accordingly, the investment strategy represented by the index may not be successful, and your investment in the notes may result in a loss. An investment in the notes may also underperform an investment linked to the Russell 1000<sup>®</sup> Growth Total Return Index as a whole.

---

**Table of Contents****The Return on Your Notes Is Based on an Index That Reflects the Total Return, Not the Price Return**

The return on your notes is based on the performance of the index, which is a total return based calculation of the Russell 1000<sup>®</sup> Growth Total Return Index. Unlike a price return index, which does not reflect dividends paid on the stocks comprising the index, the level of the index reflects both the price performance of the index stocks and the reinvestment in the index of any regular cash dividends paid on the index stocks. The index stock issuers may decide at any time to alter their dividend policies, including by ceasing to pay regular cash dividends entirely, and have no obligation to consider the interests of investors in the notes when making such decisions. Any change in the amount of regular cash dividends paid on the index stocks may have an adverse impact on the level of the index, and therefore on the market value of your notes and on any payment on your notes.

**As Calculation Agent, GS&Co. Will Have the Authority to Make Determinations that Could Affect the Value of Your Notes**

As calculation agent for your notes, GS&Co. will have discretion in making all determinations regarding the index, market disruption events, business days, trading days, including determining the closing level or intraday level of the index on any valuation date; the 3-month USD LIBOR rate; whether your notes will be redeemed; the valuation dates; the final valuation date; the redemption valuation dates; the automatic redemption valuation date, the redemption dates, the stated maturity date and the amount payable on your notes. The calculation agent also has discretion in making certain adjustments relating to a discontinuation or modification of the index. See *Specific Terms of Your Notes* *Discontinuance or Modification of the Index* below. Further, if GS&Co. as calculation agent determines on a day that 3-month USD LIBOR is scheduled to be determined under the terms of the notes, that 3-month USD LIBOR has been discontinued, then GS&Co. will use a substitute or successor rate that it has determined in its sole discretion is most comparable to 3-month USD LIBOR, provided that if GS&Co. determines there is an industry-accepted successor rate, then GS&Co. shall use such successor rate. If GS&Co. has determined a substitute or successor rate in accordance with the foregoing, GS&Co. in its sole discretion may determine the definition of business day and the valuation dates 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 3-month USD LIBOR rate, in a manner that is consistent with industry-accepted practices for such substitute or successor rate. See *Summary Information* *Key Terms* *Discontinuance of 3-month USD LIBOR* above. The exercise of this discretion by GS&Co. could adversely affect the value of your notes 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 Can Postpone a Redemption Valuation Date, the Automatic Redemption Valuation Date, a Loss Rebalancing Date, a Quarterly Rebalancing Date or the Final Valuation Date, as Applicable, If a Market Disruption Event or a Non-Trading Day Occurs or is Continuing**

The calculation agent may be required to exercise discretion in determining the amount payable on your notes or the rebalancing amount in the event of a market disruption event. If the calculation agent determines that, on a date that would otherwise be a redemption valuation date, the automatic redemption valuation date, a loss rebalancing date, a quarterly rebalancing date or the final valuation date, as applicable, a market disruption event has occurred or is continuing or that day is not a trading day, the applicable redemption valuation date, the automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or the final valuation date will be postponed until the first following trading day on which the calculation agent determines that a market disruption event does not occur and is not continuing. In no case, however, will (i) a redemption valuation date, the automatic redemption valuation date or the final valuation date be postponed by more than thirty calendar days or (ii) a loss rebalancing date or quarterly rebalancing date be postponed by more than five trading days. As a result of any postponement, you will be



exposed to market risk in the event the market fluctuates between the originally scheduled redemption valuation date, automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or final valuation date, as applicable, and the actual redemption valuation date, automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or final valuation date. In particular, any postponement of a rebalancing date could potentially cause the leverage factor to significantly exceed 2, thereby increasing your exposure to the index during a period of market disruption. Moreover, if a redemption valuation date, the automatic redemption valuation date, a loss rebalancing date, a quarterly rebalancing date or the final valuation date is postponed to the last possible day, but the market disruption event has not ceased by that day or that day is not a trading day, that day will nevertheless be the applicable redemption valuation date, the automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or the final valuation date. In such a case, the calculation agent will determine the applicable closing level for the applicable redemption valuation date, the automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or the final valuation date based on the procedures described under **Specific Terms of Your Notes** **Consequences of a Market Disruption Event or a Non-Trading Day** below.

S-40

**Table of Contents**

**Certain Considerations for Insurance Companies and Employee Benefit Plans**

Any insurance company or fiduciary of a pension plan or other employee benefit plan that is subject to the prohibited transaction rules of the Employee Retirement Income Security Act of 1974, as amended, which we call ERISA, or the Internal Revenue Code of 1986, as amended, including an IRA or a Keogh plan (or a governmental plan to which similar prohibitions apply), and that is considering purchasing the offered notes with the assets of the insurance company or the assets of such a plan, should consult with its counsel regarding whether the purchase or holding of the offered notes could become a prohibited transaction under ERISA, the Internal Revenue Code or any substantially similar prohibition in light of the representations a purchaser or holder in any of the above categories is deemed to make by purchasing and holding the offered notes. This is discussed in more detail under Employee Retirement Income Security Act below.

**The Tax Consequences of an Investment in Your Notes Are Uncertain**

The tax consequences of an investment in your notes are uncertain, both as to the timing and character of any inclusion in income in respect of your notes.

The Internal Revenue Service announced on December 7, 2007 that it is considering issuing guidance regarding the tax treatment of an instrument such as your notes, and any such guidance could adversely affect the value and the tax treatment of your notes. Among other things, the Internal Revenue Service may decide to require the holders to accrue ordinary income on a current basis and recognize ordinary income on payment at maturity, and could subject non-U.S. investors to withholding tax. Furthermore, in 2007, legislation was introduced in Congress that, if enacted, would have required holders that acquired instruments such as your notes after the bill was enacted to accrue interest income over the term of such instruments even though there will be no interest payments over the term of such instruments. It is not possible to predict whether a similar or identical bill will be enacted in the future, or whether any such bill would affect the tax treatment of your notes. We describe these developments in more detail under Supplemental Discussion of U.S. Federal Income Tax Consequences United States Holders Possible Change in Law below. You should consult your tax advisor about this matter. Except to the extent otherwise provided by law, GS Finance Corp. intends to continue treating the notes for U.S. federal income tax purposes in accordance with the treatment described under Supplemental Discussion of U.S. Federal Income Tax Consequences below unless and until such time as Congress, the Treasury Department or the Internal Revenue Service determine that some other treatment is more appropriate. Please also consult your tax advisor concerning the U.S. federal income tax and any other applicable tax consequences to you of owning your notes in your particular circumstances.

**United States Alien Holders May be Subject to Withholding Tax Under Section 871(m) in Respect of the Notes**

Section 871(m) of the Internal Revenue Code of 1986, as amended, requires withholding in respect of dividend equivalents paid or deemed paid to non-U.S. persons with respect to certain financial instruments. Section 871(m) provides certain exceptions to this withholding regime, including for instruments linked to certain broad-based indices that meet requirements set forth in the applicable Treasury regulations ( Qualified Indices ). The index should be a Qualified Index for 2018 and, therefore, notes with a calculation time (generally, the time of pricing) in 2018 should not be subject to withholding under Section 871(m). However, this determination is required to be made annually, and therefore the treatment of notes with a calculation time in a year after 2018 will generally depend on the status of the index as a Qualified Index as of the beginning of the relevant year. Moreover, our determination regarding Section 871(m) is not binding on the Internal Revenue Service, and the Internal Revenue Service may disagree with this determination.

In the event that in the future the index does not constitute a Qualified Index, notes issued (or deemed issued) thereafter could be subject to Section 871(m), in which case United States alien holders would be subject to a 30% withholding tax (which may be reduced under an applicable treaty) to the extent of any dividends attributable to the shares of U.S. equities reflected (indirectly) in their notes from time to time. In addition, if notes issued in the future were subject to withholding under Section 871(m), because all notes will have the same CUSIP and ISIN numbers withholding agents may not be able to distinguish between notes that are subject to Section 871(m) withholding and those that are not. As a result, United States alien holders of exempt notes may not be able to establish to the satisfaction of their custodians or other withholding agents that their notes are exempt from Section 871(m) withholding.

We will not be required to pay any additional amounts in respect of any withholding taxes. You should consult your tax adviser about the possible application of Section 871(m) in your circumstances.

**Foreign Account Tax Compliance Act (FATCA) Withholding May Apply to Payments on Your Notes, Including as a Result of the Failure of the Bank or Broker Through Which You Hold the Notes to Provide Information to Tax Authorities**

Please see the discussion under **United States Taxation Taxation of Debt Securities Foreign Account Tax Compliance Act (FATCA) Withholding** in the accompanying prospectus for a description of the applicability of FATCA to payments made on your notes.

**Table of Contents****SPECIFIC TERMS OF YOUR NOTES**

*We refer to the notes we are offering by this prospectus supplement as the offered notes or the notes. Please note that in this prospectus supplement, references to GS Finance Corp., we, our and us mean only GS Finance Corp. and do not include its subsidiaries or affiliates, references to The Goldman Sachs Group, Inc., our parent company, mean only The Goldman Sachs Group, Inc. and do not include its subsidiaries or affiliates and references to Goldman Sachs mean The Goldman Sachs Group, Inc. together with its consolidated subsidiaries and affiliates, including us. Also, references to the accompanying prospectus mean the accompanying prospectus, dated July 10, 2017, and references to the accompanying prospectus supplement mean the accompanying prospectus supplement, dated July 10, 2017, for Medium-Term Notes, Series E, in each case of GS Finance Corp. and The Goldman Sachs Group, Inc. Please note that in this section entitled Specific Terms of Your Notes, references to holders mean those who own notes 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 notes registered in street name or in notes issued in book-entry form through The Depository Trust Company. Please review the special considerations that apply to owners of beneficial interests in the accompanying prospectus, under Legal Ownership and Book-Entry Issuance.*

The offered notes are part of a series of debt securities, entitled Medium-Term Notes, Series E, that we may issue under the indenture from time to time as described in the accompanying prospectus supplement and accompanying prospectus. The offered notes are also indexed debt securities, as defined in the accompanying prospectus.

This prospectus supplement summarizes specific financial and other terms that apply to the offered notes, including your notes; terms that apply generally to all Series E medium-term notes are described in Description of Notes We May Offer in the accompanying prospectus supplement. The terms described here supplement those described in the accompanying prospectus supplement and the accompanying prospectus and, if the terms described here are inconsistent with those described there, the terms described here are controlling.

In addition to those terms described under Summary Information in this prospectus supplement, the following terms will apply to your notes:

**No interest:** we will not pay interest on your notes

**Specified currency:**

U.S. dollars ( \$ )

**Form of note:**

global form only: yes, at DTC

non-global form available: no

**Denominations:** each note registered in the name of a holder must have a face amount of \$100 or an integral multiple of \$100 in excess thereof

**Defeasance applies as follows:**

full defeasance: no

covenant defeasance: no

**Other terms:**

the default amount will be payable on any acceleration of the maturity of your notes as described under Special Calculation Provisions below

a business day for your notes will not be the same as a business day for our other Series E medium-term notes, as described under Special Calculation Provisions below

a trading day for your notes will be as described under Special Calculation Provisions below

Please note that the information about the original issue date, issue price, underwriting commission and net proceeds to GS Finance Corp. on the front cover page or elsewhere in this prospectus supplement relates only to the initial issuance and sale of the notes to GS&Co. on the date of this prospectus supplement. We may decide to sell additional notes on one or more dates after the date of this prospectus supplement, at issue prices and with underwriting discounts or commissions and net proceeds that differ from the amounts set forth on the front cover page or elsewhere in this prospectus supplement. If you have purchased your notes in a market-making transaction after the initial issuance and sale of the notes, any such relevant information about the sale to you will be provided in a separate confirmation of sale.

We describe the terms of your notes in more detail below.

---

**Table of Contents****Index, Index Sponsor and Index Stocks**

In this prospectus supplement, when we refer to the index, we mean the index specified on the front cover page, or any successor index, as it may be modified, replaced or adjusted from time to time as described under **Payment of Principal on Stated Maturity Date** **Discontinuance or Modification of the Index** below. When we refer to the index sponsor as of any time, we mean the entity, including any successor sponsor, that determines and publishes the index as then in effect. When we refer to the index stocks as of any time, we mean the stocks that comprise the index as then in effect, after giving effect to any additions, deletions or substitutions.

**Payment of Principal on Stated Maturity Date**

Unless previously redeemed, for each \$100 face amount of your notes, we will pay you on the stated maturity date an amount in cash *equal* to (i) the closing indicative note value on the final valuation date *minus* (ii) the settlement fee on the final valuation date.

***Closing Indicative Note Value***

The closing indicative note value with respect to the initial valuation date is \$100. The closing indicative note value with respect to any valuation date other than the initial valuation date is equal to (i) the asset position on such valuation date *minus* (ii) the financing level on such valuation date, subject to a minimum of \$0. The closing indicative note value is intended to approximate the intrinsic economic value of the notes at a particular point in time and will fluctuate over time based on the changes in the closing level of the index, subject to applicable fees. **The closing indicative note value is not the closing price or any trading price of the notes in the secondary market, and the trading price of notes at any time may vary significantly from this value.** The closing indicative note value is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol **FRLGIV Index** .

***Intraday Indicative Note Value***

The intraday indicative note value at any given time on any valuation date after the initial valuation date, before the closing indicative note value for such day is published is *equal* to (i) the intraday asset position at such time on the current valuation date *minus* (ii) the financing level on the immediately preceding valuation date *minus* (iii) the daily investor fee on the current valuation date, subject to a minimum of \$0. The intraday indicative note value is intended to approximate the intrinsic economic value of the notes during the trading day and will fluctuate within a trading day based on changes in the intraday level of the index, subject to applicable fees. **The intraday indicative note value is not a trading price of the notes in the secondary market, and the trading price of notes at any time may vary significantly from this value.**

The intraday indicative note value is expected to be published every 15 seconds on each valuation date during the hours on which trading is generally conducted on NYSE Arca, so long as no market disruption event has occurred or is continuing. This intraday indicative note value is expected to be so published under the Bloomberg symbol **FRLGIV Index** .

***Asset Position***

The asset position on the initial valuation date is \$200, which is equal to the initial leverage factor *times* the face amount per note. The asset position on any valuation date other than the initial valuation date is equal to the *sum* of (i) the *product* of (a) the asset position on the immediately preceding valuation date *times* (b) the index performance

factor on the current valuation date *plus* (ii) the rebalancing amount (if any) on the current valuation date.

The asset position represents a hypothetical leveraged investment in the index and reflects the exposure to the index. The value of the asset position will increase or decrease depending on the performance of the index and, on each rebalancing date, will further increase or decrease to reflect changes to the exposure to the index due to the rebalancing adjustment. The asset position is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGAP Index .

***Intraday Asset Position***

The intraday asset position at any given time on any valuation date after the initial valuation date is *equal* to the *product* of (i) the asset position on the immediately preceding valuation date *times* (ii) the intraday index performance factor.

***Initial Leverage Factor***

The initial leverage factor is 2.

***Leverage Factor***

The leverage factor on any valuation date is the *quotient* of (i) the asset position on such valuation date *divided by* (ii) the closing indicative note value on such valuation date.

The leverage factor reflects the leveraged exposure to the index and will reset to approximately 2 on each rebalancing date.

---

**Table of Contents*****Index Performance Factor***

The index performance factor on the initial valuation date is 1.

The index performance factor on any valuation date other than the initial valuation date is equal to the *quotient* of (i) the closing level of the index on the current valuation date *divided by* (ii) the closing level of the index on the immediately preceding valuation date.

***Intraday Index Performance Factor***

The intraday index performance factor at any given time on any valuation date after the initial valuation date is *equal* to the *quotient* of (i) the applicable intraday level of the index at any such time *divided by* (ii) the closing level of the index on the immediately preceding valuation date.

***Financing Level***

The financing level on the initial valuation date is \$100. The financing level on any valuation date other than the initial valuation date is *equal* to the *sum* of (i) the financing level on the immediately preceding valuation date *plus* (ii) the daily investor fee on the current valuation date *plus* (iii) the rebalancing fee (if any) on the current valuation date *plus* (iv) the rebalancing amount (if any) on the current valuation date.

The financing level represents a hypothetical loan and the accrual of the daily investor fee and the rebalancing fee (on each rebalancing date). On each rebalancing date, the financing level will increase due to the rebalancing fee and will increase or decrease to reflect changes in the hypothetical loan associated with the rebalanced exposure to the index. The daily investor fee is intended to compensate the issuer for providing investors leveraged participation in the index, including financing fees that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index.

The financing level is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGFL Index .

***Settlement Fee***

The settlement fee with respect to redemption at the option of the holder and payment on the stated maturity date is equal to the product of 0.06% times the asset position on the applicable redemption valuation date or the final valuation date, as applicable.

The settlement fee is assessed to account for the brokerage and transaction costs in unwinding any hedge the issuer may have relating to the notes.

***Daily Investor Fee***

The daily investor fee on the initial valuation date is \$0. The daily investor fee on any valuation date other than the initial valuation date is *equal* to the *product* of (i) the *sum* of (a) the *product* of (1) the financing level on the immediately preceding rebalancing date (or if none, the inception date) *times* (2) the financing fee rate *plus* (b) the *product* of (1) 0.65% per annum *times* (2) 50% *times* (3) the asset position on the immediately preceding valuation date *times* (ii) the *quotient* of (a) the number of calendar days from, but excluding, the immediately preceding valuation date to, and including, the current valuation date *divided by* (b) 360. In no case will the daily investor fee be



negative.

Notwithstanding the foregoing, if a redemption valuation date or the final valuation date is postponed as described under Redemption Redemption Valuation Date and Final Valuation Date , the daily investor fee on the notes being redeemed will only accrue during the first five trading days of such postponement.

The daily investor fee is assessed daily and is intended to compensate the issuer for providing investors leveraged participation in the index, including financing fees that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index.

***Financing Fee Rate***

The financing fee rate prior to and including the first quarterly rebalancing date is 3.12175%. On any valuation date after the first quarterly rebalancing date, the financing fee rate will be equal to the *sum* of (i) 0.81% *plus* (ii) 3-month USD LIBOR calculated on the immediately preceding quarterly rebalancing date.

The financing fee rate is intended to represent a rate for a financing fee that investors may have otherwise incurred had they sought to borrow funds at a similar rate from a third party to invest in the index.

**Table of Contents**

***3-Month USD LIBOR***

When we refer to 3-month USD LIBOR on any day, we mean the 3-month London Interbank Offered Rate (LIBOR) for deposits in U.S. dollars as it appears on the Reuters screen LIBOR page (or any successor or replacement service or page thereof) at 11:00 a.m., London time on such day (or, if such day is not a London business day, the immediately preceding London business day). The Reuters screen LIBOR page means the display page designated as LIBOR01, or any successor or replacement page or pages, on the Thomson Reuters Eikon service, or any successor service on which London interbank rates of major banks for U.S. dollars are displayed.

If the calculation agent determines, on a day on which 3-month USD LIBOR is scheduled to be determined, that 3-month USD LIBOR 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 3-month USD LIBOR, 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 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 3-month USD LIBOR, in a manner that is consistent with industry-accepted practices for such substitute or successor rate. Unless the calculation agent uses a substitute or successor rate as so provided, if the 3-month USD LIBOR rate cannot be determined in the manner described above, then:

If 3-month USD LIBOR does not appear on the Reuters screen LIBOR page on any day, then the calculation agent will determine 3-month USD LIBOR on the basis of the rates at which deposits in U.S. dollars are offered by four major banks in the London interbank market at approximately 11:00 a.m., London time, on such London business day to prime banks in the London interbank market for a period of three months commencing in two London business days and in a representative amount. The calculation agent will request the principal London office of each of the four major banks in the London interbank market to provide a quotation of its rate. If at least two such quotations are provided, 3-month USD LIBOR for such London business day will be the arithmetic mean of the quotations.

If fewer than two quotations are provided as requested, 3-month USD LIBOR for such London business day will be the arithmetic mean of the rates quoted by major banks in New York City, selected by the calculation agent, at approximately 11:00 a.m., New York City time, on such London business day for loans in U.S. dollars to leading European banks for a period of three months commencing in two London business days and in a representative amount.

If no quotation is provided, 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 3-month USD LIBOR or any of the foregoing lending rates, shall determine 3-month USD LIBOR for the applicable day in its sole discretion.

For the purposes of the previous paragraph, representative amount means an amount that is representative for a single transaction in the relevant market at the relevant time.

***Stated Maturity Date***

The stated maturity date is April 3, 2028, unless that day is not a business day, in which case the stated maturity date will be postponed to the next following business day. If the final valuation date is postponed as described under **Final Valuation Date** below, the stated maturity date will be postponed by the same number of business day(s) from but excluding the originally scheduled final valuation date to and including the actual final valuation date.

***Final Valuation Date***

The final valuation date is March 29, 2028, unless the calculation agent determines that a market disruption event occurs or is continuing on that day or that day is not otherwise a trading day. In that event, the final valuation date will be the first following trading day on which the calculation agent determines that a market disruption event does not occur and is not continuing. In no event, however, will the final valuation date be postponed by more than thirty calendar days. If the final valuation date is postponed to the last possible day, but a market disruption event occurs or is continuing on that day or that day is not a trading day, that day will nevertheless be the final valuation date.

***Valuation Dates***

The valuation dates are each trading day during the period commencing on the initial valuation date and ending on the final valuation date. Notwithstanding the immediately preceding sentence, if the calculation agent determines that a market disruption event occurs or is continuing on a redemption valuation date, the automatic redemption valuation date,

## **Table of Contents**

a loss rebalancing date, a quarterly rebalancing date or the final valuation date, such redemption valuation date, automatic redemption valuation date, loss rebalancing date, quarterly rebalancing date or final valuation date, as applicable, will be postponed for the purpose of the redemption, rebalancing or maturity valuation as described under Redemption Valuation Date , Automatic Redemption Valuation Date , Rebalancing Loss Rebalancing Date and Rebalancing Quarterly Rebalancing Date below and Final Valuation Date above, as applicable.

## **Bloomberg Symbols**

The Bloomberg symbols under which information relating to the notes can be located are set forth below. The publication of this information may occasionally be subject to delay or postponement.

Closing level of the index and intraday level of the index: RU10GRTR Index

Closing indicative note value and intraday indicative note value: FRLGIV Index

Asset position: FRLGAP Index

Financing level: FRLGFL Index

Loss rebalancing trigger: FRLGRT Index

Automatic redemption trigger: FRLGAT Index

The closing indicative note value, intraday indicative note value, asset position, financing level, loss rebalancing trigger and automatic redemption trigger will be calculated and published by the calculation agent or an entity appointed by the calculation agent, which may be an affiliate of the calculation agent, on each trading day so long as no market disruption event has occurred and is continuing. As of the date hereof, ICE Data Indices LLC has been so appointed for the purpose of such calculations and publications.

The notes are not sponsored, endorsed, sold or marketed by ICE Data Indices, LLC, its affiliates ( ICE Data ) or their respective third party suppliers.

ICE DATA OR ITS THIRD PARTY SUPPLIERS MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND HEREBY EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INTRADAY INDICATIVE NOTE VALUES, THE NOTES OR ANY ETN DATA INCLUDED THEREIN. IN NO EVENT SHALL ICE DATA HAVE ANY LIABILITY FOR ANY SPECIAL, PUNITIVE, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS), EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

## **Redemption**

The notes are subject to (i) redemption at the option of the holder, (ii) redemption at the option of the issuer and (iii) automatic redemption, in each case as described below.

***Redemption Valuation Date***

With respect to redemption at the option of the holder, the redemption valuation date is the first valuation date following the date on which you deliver notice to us in compliance with the procedures under Redemption at the Option of the Holder Requirements below.

With respect to redemption at the option of the issuer, the redemption valuation date is the tenth valuation date following the date on which we provide notice to holders of the notes and the trustee, as described under Redemption at the Option of the Issuer below.

With respect to redemption at the option of the holder and redemption at the option of the issuer, if a market disruption event occurs or is continuing on a redemption valuation date, such redemption valuation date will be the first following trading day on which the calculation agent determines that a market disruption event does not occur and is not continuing. In no event, however, will a redemption valuation date be postponed by more than thirty calendar days. If a redemption valuation date is postponed to the last possible day, but a market disruption event occurs or is continuing on that day or that day is not a trading day, that day will nevertheless be the redemption valuation date.

With respect to automatic redemption, the automatic redemption valuation date is the automatic redemption event date, subject to postponement and as further described under Automatic Redemption Valuation Date below.

**If we provide notice of an issuer redemption of the notes and thereafter an automatic redemption event occurs on or prior to the redemption valuation date for the redemption at the option of the issuer, our notice of issuer redemption will be superseded and each \$100 face amount of your notes will be automatically redeemed on the relevant redemption date (for the automatic redemption) at an amount equal to the automatic redemption note**

## **Table of Contents**

**value. Additionally, if you provide notice of holder redemption but an automatic redemption event occurs on or prior to the applicable redemption valuation date, your notice of holder redemption will be superseded and your notes will be automatically redeemed on the relevant redemption date (for the automatic redemption) at an amount equal to the automatic redemption note value.**

### ***Redemption Date***

With respect to redemption at the option of the holder and redemption at the option of the issuer, the redemption date is the third business day following the relevant redemption valuation date.

With respect to automatic redemption, the redemption date is the fifth business day following the automatic redemption valuation date.

### ***Redemption at the Option of the Holder***

You may elect to have us redeem your notes, in whole or in part, on any valuation date, subject to the procedures and terms set forth below, provided that in each case you must redeem at least \$500,000 face amount of your notes (which may be aggregated with other noteholders seeking to redeem). If you elect to have us redeem at least \$500,000 face amount of your notes on any valuation date, on the applicable redemption date you will receive, for each \$100 face amount of your notes so redeemed, an amount in cash equal to (i) the closing indicative note value on the applicable redemption valuation date *minus* (ii) the settlement fee on such redemption valuation date.

### ***Redemption at the Option of the Holder Requirements***

To request that we redeem your notes, you must instruct your broker or other person through which you hold your notes to take the following steps:

Send a notice of redemption, substantially in the form set forth under Form of Notice of Redemption at the Option of the Holder on page S-74 (a redemption notice), to us via email at [gs-note-redemptions@ny.email.gs.com](mailto:gs-note-redemptions@ny.email.gs.com), with Large Cap Growth Index-Linked ETNs due 2028, CUSIP No. 362273302 as the subject line, by no later than 3:00 p.m., New York City time, on any valuation date. We or our affiliate must acknowledge receipt of the redemption notice on the same business day for it to be effective, which acknowledgment will be deemed to evidence our acceptance of your redemption request;

Instruct your DTC custodian to book a delivery versus payment trade, with respect to each \$100 face amount of your notes to be redeemed, on the applicable redemption date at a price in cash equal to (i) the closing indicative note value on the applicable redemption valuation date *minus* (ii) the settlement fee on such redemption valuation date; and

Cause your DTC custodian to deliver the trade as booked for settlement via DTC at or prior to 10:00 a.m., New York City time, on the day on which the notes will be redeemed.

Different brokerage firms may have different deadlines for accepting instructions from their customers. Accordingly, you should consult the brokerage firm through which you own your interest in the notes in respect of those deadlines. If we do not receive your redemption notice by 3:00 p.m., New York City time, on the applicable valuation date or we

(or our affiliates) do not acknowledge receipt of the redemption notice on the same business day, your redemption notice will not be effective, and we will not redeem your notes. Once given, a redemption notice may not be revoked.

The calculation agent will, in its sole discretion, resolve any questions that may arise as to the validity of a redemption notice and the timing of receipt of a redemption notice or as to whether and when the required deliveries have been made. Questions about the redemption requirements should be directed to [gs-note-redemptions@ny.email.gs.com](mailto:gs-note-redemptions@ny.email.gs.com).

You will not be permitted to submit a redemption notice that results in a redemption date later than the stated maturity date.

If you provide notice of holder redemption but an automatic redemption event occurs on or prior to the applicable redemption valuation date, your notice of holder redemption will be superseded and your notes will be automatically redeemed on the redemption date (for the automatic redemption) at an amount equal to the automatic redemption note value. Additionally, if we provide notice of an issuer redemption of the notes, any subsequent notice of holder redemption will not be effective.

***Redemption at the Option of the Issuer***

We may redeem your notes, at our option, in whole but not in part, on any valuation date prior to the stated maturity date, for an amount in cash for each \$100 face amount of your notes equal to the closing indicative note value on the applicable redemption valuation date.

## **Table of Contents**

If we choose to exercise our early redemption right described in this prospectus supplement, we will notify the holder of your notes and the trustee.

If we give the holder a redemption notice, we will redeem the entire outstanding face amount of your notes. On the redemption date, we will make the payment to the holder of record on the scheduled business day immediately preceding the redemption date, in the manner described under **Manner of Payment** below.

We will not give a redemption notice that results in a redemption date later than the stated maturity date.

If we provide notice of an issuer redemption of the notes and then an automatic redemption event occurs on or prior to the applicable redemption valuation date, our notice of issuer redemption will be superseded and each \$100 face amount of your notes will be automatically redeemed on the redemption date (for the automatic redemption) at an amount equal to the automatic redemption note value.

### ***Automatic Redemption***

If your notes are automatically redeemed, on the applicable redemption date you will receive, for each \$100 face amount of your notes, an amount in cash equal to the automatic redemption note value. The determination of the automatic redemption note value upon an automatic redemption event may be based on the index VWAP level as described below.

If an automatic redemption event occurs on a rebalancing date, the notes will be automatically redeemed pursuant to the automatic redemption event without giving regard to the rebalancing adjustment.

### ***Automatic Redemption Event***

We will automatically redeem your notes, in whole but not in part, if, at any time on any valuation date prior to the final valuation date, the intraday level of the index is equal to or less than the automatic redemption trigger.

### ***Automatic Redemption Trigger***

The automatic redemption trigger, at any time on any valuation date, is 70% of the closing level of the index on the immediately preceding rebalancing date (or, in the case of any time on any valuation date that is on or prior to the first rebalancing date, 70% of the closing level of the index on the initial valuation date). The automatic redemption trigger is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol **FRLGAT Index** .

### ***Automatic Redemption Event Date***

The automatic redemption event date is the valuation date on which the automatic redemption event occurs.

### ***Automatic Redemption Valuation Date***

The automatic redemption valuation date is the automatic redemption event date, provided that if (i) a market disruption event occurs after the occurrence of the automatic redemption event but before the determination of the automatic redemption note value and (ii) such market disruption event is continuing at 3:30 p.m., New York City time, on the automatic redemption event date, the automatic redemption valuation date will be the first following valuation date on which the calculation agent determines that a market disruption event does not occur and is not



continuing. In no event, however, will the automatic redemption valuation date be postponed by more than thirty calendar days. If the automatic redemption valuation date is postponed to the last possible day, but a market disruption event occurs or is continuing on that day, that day will nevertheless be the automatic redemption valuation date.

***Automatic Redemption Note Value***

The automatic redemption note value is *equal* to the *result* of (i) the *product* of (a) the asset position on the valuation date immediately preceding the automatic redemption event date *times* (b) the automatic redemption index performance factor *minus* (ii) the financing level on the automatic redemption event date, subject to a minimum of \$0.

***Automatic Redemption Index Performance Factor***

If an automatic redemption event occurs prior to 2:30 p.m., New York City time, or at or after 3:30 p.m., New York City time, on the automatic redemption event date, then the automatic redemption index performance factor will *equal* the *quotient* of (i) the index VWAP level divided by (ii) the closing level of the index on the valuation date immediately preceding the automatic redemption event date. If an automatic redemption event occurs at or after 2:30 p.m., New York City time, but prior to 3:30 p.m., New York City time, on the automatic redemption event date, then the automatic redemption index performance factor will be *equal* to the *quotient* of (i) the closing level of the index on the automatic redemption event date *divided* by (ii) the closing level of the index on the valuation date immediately preceding the automatic redemption event date.

---

**Table of Contents*****Index VWAP Level***

On any applicable valuation date, the index VWAP level is the *sum* of the *products*, as calculated for each index stock, of (i) the VWAP of such index stock *times* (ii) the *quotient* of (a) the available float shares of such index stock on such valuation date *divided* by (b) the index divisor on such valuation date. The index VWAP level is intended to replicate the proceeds realized from a sale of the index stocks in the quantities that they comprise the index gradually over the relevant VWAP period.

***VWAP (With Respect to Each Index Stock)***

With respect to each index stock on any applicable valuation date, the volume-weighted average price (VWAP) is the *sum* of the *quotients*, calculated for each transaction on such index stock on the primary exchange during the applicable VWAP period, of (i) the *product* of (a) the gross price at which such transaction is executed *times* (b) the relevant number of shares of the index stock referenced in such transaction *divided* by (ii) the total number of shares of the index stock traded on the primary exchange during such VWAP period.

Notwithstanding the above, in the event of a suspension of or limitation of trading in an index stock on its respective primary market during a part or all of the VWAP period where such suspension or limitation does not trigger a market disruption event (such suspension or limitation, an index stock disruption), the VWAP will be calculated during the portion of the VWAP period during which there is no such index stock disruption; provided that if the index stock disruption continues for the entire VWAP period, the calculation agent will determine the VWAP for such index stock in its sole discretion and in a commercially reasonable manner.

***VWAP Period***

If an automatic redemption event occurs prior to 2:30 p.m., New York City time, on the automatic redemption event date, the VWAP period is the one hour period starting thirty minutes after the automatic redemption event occurs. If an automatic redemption event occurs at or after 3:30 p.m., New York City time, on the automatic redemption event date, the VWAP period is the one hour period starting at 10:00 a.m., New York City time, on the valuation date immediately following such automatic redemption event date.

***Available Float Shares***

For each index stock, on any applicable valuation date, the available float shares is the *result*, as published by the index sponsor, of (i) the total shares of such index stock outstanding *minus* (ii) the shares of such index stock held by control holders.

***Index Divisor***

On any applicable valuation date, the index divisor is a value calculated and published by the index sponsor that is intended to maintain conformity in index values over time.

***Primary Exchange***

For each index stock, the exchange on which such index stock has its primary listing, as determined by the calculation agent.

**Rebalancing**

***Loss Rebalancing Event***

If, on any valuation date that is not a rebalancing date, the closing level of the index is equal to or less than the loss rebalancing trigger, a loss rebalancing event is deemed to have occurred on such valuation date unless an automatic redemption event occurs. A loss rebalancing event will result in your notes being rebalanced on the loss rebalancing date with the aim of resetting the then-current leverage factor back to approximately 2. This means that after the valuation date following a loss rebalancing event (a loss rebalancing date as described below) a constant percentage increase in the closing level of the index will have less of a positive effect on the value of your notes relative to before such loss rebalancing date.

***Loss Rebalancing Trigger***

The loss rebalancing trigger on any valuation date is 80% of the closing level of the index on the immediately preceding rebalancing date or, prior to the first rebalancing date, 80% of the closing level of the index on the initial valuation date. The loss rebalancing trigger is expected to be published on each valuation date, so long as no market disruption event has occurred or is continuing, under the Bloomberg symbol FRLGRT Index .

***Loss Rebalancing Date***

A loss rebalancing date is the first valuation date immediately following any valuation date on which a loss rebalancing event occurs, unless the calculation agent determines that a market disruption event occurs or is continuing on that day

---

**Table of Contents**

or that day is not otherwise a trading day. In that event, the loss rebalancing date will be the first following trading day on which the calculation agent determines that a market disruption event does not occur and is not continuing. In no event, however, will the loss rebalancing date be postponed by more than five trading days. If the loss rebalancing date is postponed to the last possible day, but a market disruption event occurs or is continuing on that day or that day is not a trading day, that day will nevertheless be the loss rebalancing date.

***Quarterly Rebalancing Calculation Date***

The quarterly rebalancing calculation dates are the last valuation date of each March, June, September and December, commencing in June 2018 and ending in December 2027. This means that, after each quarterly rebalancing date, a constant percentage increase in the closing level of the index may have more or less of a positive effect on the value of your notes relative to before such quarterly rebalancing date.

***Quarterly Rebalancing Date***

A quarterly rebalancing date is the first valuation date immediately following each quarterly rebalancing calculation date, unless the calculation agent determines that a market disruption event occurs or is continuing on that day or that day is not otherwise a trading day. In that event, the quarterly rebalancing date will be the first following trading day on which the calculation agent determines that a market disruption event does not occur and is not continuing. In no event, however, will the quarterly rebalancing date be postponed by more than five trading days. If the quarterly rebalancing date is postponed to the last possible day, but a market disruption event occurs or is continuing on that day or that day is not a trading day, that day will nevertheless be the quarterly rebalancing date.

***Rebalancing Date***

A rebalancing date is either a quarterly rebalancing date or loss rebalancing date.

***Rebalancing Amount***

The rebalancing amount on any valuation date that is not a rebalancing date is \$0. The rebalancing amount on any valuation date that is a rebalancing date is *equal* to the *product* of (i) the *result* of (a) the *product* of (1) *2 times* (2) the closing indicative note value on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent) *minus* (b) the asset position on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent) *times* (ii) the *quotient* of (a) the closing level of the index on the current rebalancing date *divided* by (b) the closing level of the index on the immediately preceding valuation date on which a loss rebalancing event occurs or the immediately preceding quarterly rebalancing calculation date (whichever is more recent).

The rebalancing amount represents the change in the exposure to the index as a result of any rebalancing event. On each rebalancing date, a rebalancing amount is added to or subtracted from the asset position and the financing level depending on the performance of the index since the preceding rebalancing date so that the leverage is reset to approximately 2.

***Rebalancing Fee and Rebalancing Fee Rate***

The rebalancing fee on any valuation date that is not a rebalancing date is \$0. The rebalancing fee on any valuation date that is a rebalancing date is *equal* to the *product* of (i) the rebalancing fee rate *times* (ii) the absolute value of the

rebalancing amount on such rebalancing date. In no case will the rebalancing fee be negative.

The rebalancing fee rate is 0.06%. The rebalancing fee is charged to account for the issuer's brokerage and transaction costs due to the change in the exposure to the index.

***Consequences of a Market Disruption Event or a Non-Trading Day***

If a market disruption event occurs or is continuing on a day that would otherwise be a redemption valuation date, the automatic redemption valuation date, a loss rebalancing date, a quarterly rebalancing date or the final valuation date, as applicable, or such day is not a trading day, then the redemption valuation date, the automatic redemption valuation date, the loss rebalancing date, the quarterly rebalancing date or the final valuation date, as applicable, will be postponed as described under Redemption Valuation Dates , Automatic Redemption Valuation Dates , Loss Rebalancing Date , Quarterly Rebalancing Date and Final Valuation Date above.

If the automatic redemption valuation date is postponed as described under Redemption Automatic Redemption Valuation Date , the calculation agent in its sole discretion will determine the automatic redemption index performance factor based on the index VWAP level over a one-hour period as soon as practicable after the cessation of the market disruption event. If the calculation agent determines that the index VWAP level that must be used to determine the amount payable on your notes is not available on the automatic redemption valuation date because of a market disruption event, a non-trading day or for any other reason, then the calculation agent will nevertheless determine the automatic redemption index performance factor in its sole discretion.

## **Table of Contents**

If the calculation agent determines that the closing level of the index that must be used to determine the amount payable on your notes is not available on a redemption valuation date, the automatic redemption valuation date or the final valuation date because of a market disruption event, a non-trading day or for any other reason (other than as described under **Discontinuance or Modification of the Index** below), then the calculation agent will nevertheless determine the level of the index based on its assessment, and in its sole discretion, of the level of the index on that day.

If the calculation agent determines that the closing level of the index that must be used to determine the rebalancing amount is not available on a loss rebalancing date or quarterly rebalancing date because of a market disruption event, a non-trading day or for any other reason (other than as described under **Discontinuance or Modification of the Index** below), then the calculation agent will nevertheless determine the rebalancing amount based on its assessment, and in its sole discretion, of the level of the index on that day.

### ***Discontinuance or Modification of the Index***

If the index sponsor discontinues publication of the index and the index sponsor or anyone else publishes a substitute index that the calculation agent determines is comparable to the index, or if the calculation agent designates a substitute index, then the calculation agent will determine the amount payable on your notes by reference to the substitute index. We refer to any substitute index approved by the calculation agent as a successor index.

If the calculation agent determines that the publication of the index is discontinued and there is no successor index, the calculation agent will determine the applicable level of the index (and, with respect to the determination of the index VWAP, the index divisor and the available float shares) used to determine the amount payable on your notes by a computation methodology that the calculation agent determines will as closely as reasonably possible replicate the index.

If the calculation agent determines that the index, the stocks comprising the index or the method of calculating the index is changed at any time in any respect including any split or reverse split and any addition, deletion or substitution and any reweighting or rebalancing of the index or of the index stocks and whether the change is made by the index sponsor under its existing policies or following a modification of those policies, is due to the publication of a successor index, is due to events affecting one or more of the index stocks or their issuers or is due to any other reason and is not otherwise reflected in the level of the index by the index sponsor pursuant to the then-current index methodology of the index, then the calculation agent will be permitted (but not required) to make such adjustments in the index or the method of its calculation as it believes are appropriate to ensure that the levels of the index used to determine the amount payable on your notes is equitable.

All determinations and adjustments to be made by the calculation agent with respect to the index may be made by the calculation agent in its sole discretion. The calculation agent is not obligated to make any such adjustments.

### **Default Amount on Acceleration**

If an event of default occurs and the maturity of your notes is accelerated, we will pay the default amount in respect of the principal of your notes at the maturity, instead of the amount payable on your notes as described earlier. We describe the default amount under **Special Calculation Provisions** below.

For the purpose of determining whether the holders of our Series E medium-term notes, which include your notes, are entitled to take any action under the indenture, we will treat the outstanding face amount of your notes as the outstanding principal amount of that note. Although the terms of the offered notes differ from those of the other Series

E medium-term notes, holders of specified percentages in principal amount of all Series E medium-term notes, together in some cases with other series of our debt securities, will be able to take action affecting all the Series E medium-term notes, including your notes, except with respect to certain Series E medium-term notes if the terms of such notes specify that the holders of specified percentages in the principal amount of all such notes must also consent to such action. This action may involve changing some of the terms that apply to the Series E medium-term notes, accelerating the maturity of the Series E medium-term notes after a default or waiving some of our obligations under the indenture. In addition, certain changes to the indenture and the notes that only affect certain debt securities may be made with the approval of holders of a majority of the principal amount of such affected debt securities. We discuss these matters in the accompanying prospectus under Description of Debt Securities We May Offer Default, Remedies and Waiver of Default and Modification of the Debt Indentures and Waiver of Covenants .

### **Manner of Payment**

Any payment on your notes at maturity will be made to an account designated by the holder of your notes and approved by us, or at the office of the trustee in New York City, but only when your notes are surrendered to the trustee at that office. We also may make any payment in accordance with the applicable procedures of the depository.

S-51

**Table of Contents**

**Modified Business Day**

As described in the accompanying prospectus, any payment on your notes that would otherwise be due on a day that is not a business day may instead be paid on the next day that is a business day, with the same effect as if paid on the original due date. For your notes, however, the term business day may have a different meaning than it does for other Series E medium-term notes. We discuss this term under **Special Calculation Provisions** below.

**Role of Calculation Agent**

The calculation agent in its sole discretion will make all determinations regarding the index, market disruption events, business days, trading days, including determining the closing level or intraday level of the index on any valuation date; the 3-month USD LIBOR rate; whether your notes will be redeemed; the valuation dates; the final valuation date; the redemption valuation dates; the automatic redemption valuation date, the redemption dates, the stated maturity date and the amount payable on your notes. 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.

Please note that GS&Co., our affiliate, is currently serving as the calculation agent as of the original issue date of your notes. We may change the calculation agent for your notes at any time after the original issue date without notice and GS&Co. may resign as calculation agent at any time upon 60 days' written notice to GS Finance Corp.

**Special Calculation Provisions**

***Business Day***

When we refer to a business day with respect to your notes, we mean a day that is a New York business day as described under **Description of Debt Securities We May Offer** **Calculations of Interest on Debt Securities** **Business Days** on page 21 in the accompanying prospectus.

***London Business Day***

When we refer to a London business day with respect to your notes, we mean a day that is a London business day as described under **Description of Debt Securities We May Offer** **Calculations of Interest on Debt Securities** **Business Days** on page 21 in the accompanying prospectus.

***Trading Day***

When we refer to a trading day with respect your notes, we mean a day on which the respective principal securities markets for all of the index stocks are open for trading, the index sponsor is open for business and the index is calculated and published by the index sponsor.

***Closing Level of the Index***

When we refer to the closing level of the index on any trading day, we mean the closing level of the index or any successor index reported by Bloomberg Financial Services, or any successor reporting service we may select, on such trading day for the index. Currently, whereas the index sponsor publishes the official closing level of the index to six decimal places, Bloomberg Financial Services reports the closing level of the index to fewer decimal places. As a result, the closing level of the index reported by Bloomberg Financial Services generally may be lower or higher than the official closing level of the index published by the index sponsor.



***Intraday Level of the Index***

When we refer to the intraday level of the index at any time on any trading day, we mean the level of the index or any successor index reported by Bloomberg Financial Services, or any successor reporting service we may select, at such time on such trading day for the index. Currently, whereas the index sponsor publishes the official level of the index to six decimal places, Bloomberg Financial Services reports the level of the index to fewer decimal places. As a result, the level of the index reported by Bloomberg Financial Services generally may be lower or higher than the official level of the index published by the index sponsor.

***Default Amount***

The default amount for your notes on any day (except as provided in the last sentence under **Default Quotation Period** below) will be an amount, in the specified currency for the principal of your notes, equal to the cost of having a qualified financial institution, of the kind and selected as described below, expressly assume all of our payment and other obligations with respect to your notes as of that day and as if no default or acceleration had occurred, or to undertake other obligations providing substantially equivalent economic value to you with respect to your notes. That cost will equal:

the lowest amount that a qualified financial institution would charge to effect this assumption or undertaking,  
*plus*

## **Table of Contents**

the reasonable expenses, including reasonable attorneys' fees, incurred by the holder of your notes in preparing any documentation necessary for this assumption or undertaking.

During the default quotation period for your notes, which we describe below, the holder and/or we may request a qualified financial institution to provide a quotation of the amount it would charge to effect this assumption or undertaking. If either party obtains a quotation, it must notify the other party in writing of the quotation. The amount referred to in the first bullet point above will equal the lowest or, if there is only one, the only quotation obtained, and as to which notice is so given, during the default quotation period. With respect to any quotation, however, the party not obtaining the quotation may object, on reasonable and significant grounds, to the assumption or undertaking by the qualified financial institution providing the quotation and notify the other party in writing of those grounds within two business days after the last day of the default quotation period, in which case that quotation will be disregarded in determining the default amount.

### ***Default Quotation Period***

The default quotation period is the period beginning on the day the default amount first becomes due and ending on the third business day after that day, unless:

no quotation of the kind referred to above is obtained, or

every quotation of that kind obtained is objected to within five business days after the day the default amount first becomes due.

If either of these two events occurs, the default quotation period will continue until the third business day after the first business day on which prompt notice of a quotation is given as described above. If that quotation is objected to as described above within five business days after that first business day, however, the default quotation period will continue as described in the prior sentence and this sentence.

In any event, if the default quotation period and the subsequent two business day objection period have not ended before the final valuation date, then the default amount will equal the principal amount of your notes.

### ***Qualified Financial Institutions***

For the purpose of determining the default amount at any time, a qualified financial institution must be a financial institution organized under the laws of any jurisdiction in the United States of America, Europe or Japan, which at that time has outstanding debt obligations with a stated maturity of one year or less from the date of issue and that is, or whose securities are, rated either:

A-1 or higher by Standard & Poor's Ratings Services or any successor, or any other comparable rating then used by that rating agency, or

P-1 or higher by Moody's Investors Service, Inc. or any successor, or any other comparable rating then used by that rating agency.

### ***Market Disruption Event***

With respect to any given trading day, any of the following will be a market disruption event:

a suspension, absence or material limitation of trading in index stocks constituting 20% or more, by weight, of the index on their respective primary markets, in each case for more than two consecutive hours of trading or during the one-half hour before the close of trading in that market, as determined by the calculation agent in its sole discretion, or

a suspension, absence or material limitation of trading in option or futures contracts relating to the index or to index stocks constituting 20% or more, by weight, of the index in the respective primary markets for those contracts, in each case for more than two consecutive hours of trading or during the one-half hour before the close of trading in that market, as determined by the calculation agent in its sole discretion, or

index stocks constituting 20% or more, by weight, of the index, or option or futures contracts, if available, relating to the index or to index stocks constituting 20% or more, by weight, of the index are not trading on what were the respective primary markets for those index stocks or contracts or are subject to a material reduction in trading volume, each as determined by the calculation agent in its sole discretion,

*and*, in the case of any of these events, the calculation agent determines in its sole discretion that the event could materially interfere with the ability of GS Finance Corp. or any of its affiliates or a similarly situated party to unwind all or a material portion of a hedge that could be effected with respect to the offered notes. For more information about hedging by GS Finance Corp. and/or any of its affiliates, see [Use of Proceeds](#) and [Hedging](#) below.

The following events will not be market disruption events:

a limitation on the hours or numbers of days of trading, but only if the limitation results from an announced change in the regular business hours of the relevant market, and

**Table of Contents**

a decision to permanently discontinue trading in option or futures contracts relating to the index or to any index stock.

For this purpose, an absence of trading in the primary securities market on which an index stock, or on which option or futures contracts relating to the index or an index stock, are traded will not include any time when that market is itself closed for trading under ordinary circumstances. In contrast, a suspension or limitation of trading in an index stock or in option or futures contracts, if available, relating to the index or an index stock in the primary market for that stock or those contracts, by reason of:

a price change exceeding limits set by that market,

an imbalance of orders relating to that index stock or those contracts, or

a disparity in bid and ask quotes relating to that index stock or those contracts, will constitute a suspension or material limitation of trading in that stock or those contracts in that market.

Further, for this purpose, a material reduction in trading volume will be deemed to occur on a trading day at any time that the reported trading volume on that trading day falls below 75% of the trailing 30 trading day average trading volume ( 30-day ADTV ), where the 30-day ADTV is adjusted by a ratio of the elapsed hours in such trading day divided by the total number of scheduled hours for such trading day.

As is the case throughout this prospectus supplement, references to the index in this description of market disruption events includes the index and any successor index as it may be modified, replaced or adjusted from time to time.

**Table of Contents**

**USE OF PROCEEDS**

We will lend the net proceeds from the sale of the offered notes to The Goldman Sachs Group, Inc. or its affiliates. The Goldman Sachs Group, Inc. will use the proceeds from such loans for the purposes we describe in the accompanying prospectus under "Use of Proceeds". We or our affiliates may also use those proceeds in transactions intended to hedge our obligations under the offered notes as described below.

**HEDGING**

In anticipation of the sale of the offered notes, we and/or our affiliates have entered into or expect to enter into hedging transactions involving purchases of listed or over-the-counter options, futures and other instruments linked to the index or the index stocks on or before the initial valuation date. In addition, from time to time after we issue the offered notes, we and/or our affiliates may enter into additional hedging transactions and unwind those we have entered into in connection with the offered notes and perhaps in connection with other index-linked notes we issue, some of which may have returns linked to the index or the index stocks. Consequently, with regard to your notes, from time to time, we and/or our affiliates:

expect to acquire, or dispose of positions in listed or over-the-counter options, futures or other instruments linked to the index or some or all of the index stocks,

may take or dispose of positions in the securities of the index stock issuers themselves,

may take or dispose of positions in listed or over-the-counter options or other instruments based on an index designed to track the performance of the stock exchanges or other components of the equity markets, and/or

may take short positions in the index stocks or other securities of the kind described above i.e., we and/or our affiliates may sell securities of the kind that we do not own or that we borrow for delivery to purchaser.

We and/or our affiliates may acquire a long or short position in securities similar to your notes from time to time and may, in our or their sole discretion, hold or resell those securities.

In the future, we and/or our affiliates expect to close out hedge positions relating to the offered notes and perhaps relating to other notes with returns linked to the index or the index stocks. We expect these steps to involve sales of instruments linked to the index on or shortly before the final valuation date. These steps may also involve sales and/or purchases of some or all of the index stocks, or listed or over-the-counter options, futures or other instruments linked to the index, some or all of the index stocks or indices designed to track the performance of the U.S., European, Asian or other stock exchanges or other components of the U.S., European, Asian or other equity markets or other components of such markets.

*The hedging activity discussed above may adversely affect the market value of your notes from time to time and the amount we will pay on your notes at maturity. See "Additional Risk Factors Specific to Your Notes" above for a discussion of these adverse effects.*

S-55

**Table of Contents****THE INDEX**

The Russell 1000<sup>®</sup> Growth Total Return Index (the index) is sponsored by FTSE Russell ( Russell ) and is a sub-index of the Russell 1000<sup>®</sup> Index. The index is designed to track the performance of the large- and mid-capitalization segment of the U.S. equity market and is predominantly comprised of growth stocks, meaning stocks issued by companies whose earnings are expected to grow at an above-average rate relative to the market. Additional information about the index is available on the following website: [ftse.com/analytics/factsheets/Home/Search#](http://ftse.com/analytics/factsheets/Home/Search#). We are not incorporating by reference the website or any material it includes in this prospectus supplement.

As of November 28, 2018, the top ten constituents of the index (and their respective weightings in the index) were: Apple Inc. (6.92%), Microsoft Inc. (6.31%), Amazon.com, Inc. (5.40%), Alphabet Inc. Class C (2.62%), Alphabet Inc. Class A (2.58%), Facebook, Inc. (2.57%), UnitedHealth Group Incorporated (2.12%), Visa Inc. Class A (2.00%), The Home Depot, Inc. (1.62%) and Mastercard Incorporated (1.47%). As of November 28, 2018, the 544 companies included in the index were divided into nine Russell Global Sectors. The Russell Global Sectors include (with the approximate percentage currently included in such sectors indicated in parentheses): Consumer Discretionary (18.91%), Consumer Staples (4.95%), Financial Services (12.53%), Health Care (14.11%), Materials & Processing (2.19%), Other Energy (0.81%), Producer Durables (13.23%), Technology (33.11%) and Utilities (0.15%). (Sector designations are determined by the index sponsor using criteria it has selected or developed. Index sponsors may use very different standards for determining sector designations. In addition, many companies operate in a number of sectors, but are listed in only one sector and the basis on which that sector is selected may also differ. As a result, sector comparisons between indices with different index sponsors may reflect differences in methodology as well as actual differences in the sector composition of the indices.)

The Russell 1000<sup>®</sup> Index includes approximately 1,000 of the largest securities that form the Russell 3000<sup>®</sup> Index. The Russell 3000<sup>®</sup> Index is comprised of the 3,000 largest U.S. companies, or 98% based on market capitalization, of the investable U.S. equity market. The Russell 1000<sup>®</sup> Index represents approximately 90% of the total market capitalization of the Russell 3000<sup>®</sup> Index.

The index is a total return index, meaning that regular cash dividends are reinvested across the index on the dividend ex-date.

*Selection of Constituent Stocks of the Russell 1000<sup>®</sup> Growth Index*

The Russell 1000<sup>®</sup> Growth Index is a sub-index of the Russell 1000<sup>®</sup> Index, which is a sub-index of the Russell 3000<sup>®</sup> Index. To be eligible for inclusion in the Russell 3000<sup>®</sup> Index and the Russell 1000<sup>®</sup> Index, and, consequently, the Russell 1000<sup>®</sup> Growth Index, a company's stocks must be listed on the rank day in May of a given year (the timetable is announced each spring) and Russell must have access to documentation verifying the company's eligibility for inclusion. Eligible initial public offerings ( IPOs ) are added to Russell U.S. Indices quarterly, based on total market capitalization rankings within the market-adjusted capitalization breaks established during the most recent reconstitution. To be added to any Russell U.S. index during a quarter outside of reconstitution, IPOs must meet additional eligibility criteria.

A company is included in the U.S. equity markets and is eligible for inclusion in the Russell 3000<sup>®</sup> Index and the Russell 1000<sup>®</sup> Index, and consequently, the Russell 1000<sup>®</sup> Growth Index, if that company incorporates in the U.S., has its headquarters in the U.S. and also trades with the highest liquidity in the U.S. If a company does not satisfy all of the above criteria, it can still be included in the U.S. equity market if any one of the following home country indicators is in the United States: (i) country of incorporation, (ii) country of headquarters and (iii) country in which the company trades with the highest liquidity (as defined by a two-year average daily dollar trading volume from all

exchanges within the country), and the primary location of that company's assets or its revenue, based on an average of two years of assets or revenues data, is also in the United States. In addition, if there is insufficient information to assign a company to the U.S. equity markets based on its assets or revenue, the company may nonetheless be assigned to the U.S. equity markets if the headquarters of the company is located in the United States or if the headquarters of the company is located in certain benefit-driven incorporation countries, or BDIs, and that company's most liquid stock exchange is in the United States. The BDI countries are Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Curaçao, Faroe Islands, Gibraltar, Guernsey, Isle of Man, Jersey, Liberia, Marshall Islands, Panama, Saba, Sint Eustatius, Sint Maarten and Turks and Caicos Islands. A U.S.-listed company is not eligible for inclusion within the U.S. equity market if it has been classified by Russell as a China N share on the rank date of the index reconstitution. A company will be considered a China N share if the following criteria are satisfied: (i) the company is incorporated outside of the People's Republic of China, (ii) the company is listed on the NYSE, the NASDAQ or the NYSE MKT, (iii) over 55% of the revenue or assets of the company are derived from the People's Republic of China, and (iv) the company is controlled by a mainland Chinese entity, company or individual (if the shareholder background cannot be determined with publicly available information, Russell will consider whether the establishment and origin of the company are in mainland China and whether the company is headquartered in mainland China). ADRs and ADSs are not eligible for inclusion in the Russell 3000® Index or the Russell 1000® Index, or consequently, the Russell 1000® Growth Index.

S-56



---

**Table of Contents**

In addition, all securities eligible for inclusion in the Russell 3000<sup>®</sup> Index and the Russell 1000<sup>®</sup> Index, and consequently, the Russell 1000<sup>®</sup> Growth Index, must trade on an eligible exchange (BATS, IEX, NYSE, NYSE MKT, NYSE Arca and NASDAQ).

*Exclusions from the Russell 1000<sup>®</sup> Growth Index*

Russell specifically excludes the following companies and securities from the Russell 3000<sup>®</sup> Index and the Russell 1000<sup>®</sup> Index, and consequently, the Russell 1000<sup>®</sup> Growth Index: (i) preferred and convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights, installment receipts and trust receipts; (ii) royalty trusts, U.S. limited liability companies, closed-end investment companies, companies that are required to report Acquired Fund Fees and Expenses (as defined by the SEC), including business development companies, blank check companies, special-purpose acquisition companies and limited partnerships; (iii) companies with a total market capitalization less than \$30 million; (iv) companies with only a small portion of their shares available in the marketplace (companies with 5% or less float); (v) bulletin board, pink sheets or over-the-counter traded securities, including securities for which prices are displayed on the FINRA ADF; (vi) real estate investment trusts and publicly traded partnerships that generate, or have historically generated, unrelated business taxable income and have not taken steps to block their unrelated business taxable income to equity holders; and (vii) companies with 5% or less of the company's voting rights in the hands of unrestricted shareholders (existing constituents that do not currently have more than 5% of the company's voting rights in the hands of unrestricted shareholders have until the September 2022 review to meet this requirement).

*Initial List of Eligible Securities*

The primary criterion Russell uses to determine the initial list of securities eligible for the Russell 3000<sup>®</sup> Index and the Russell 1000<sup>®</sup> Index and, consequently, the Russell 1000<sup>®</sup> Growth Index, is total market capitalization, which is calculated by multiplying the total outstanding shares for a company by the market price as of the rank day for those securities being considered at annual reconstitution. IPOs may be added between constitutions as noted below. All common stock share classes are combined in determining a company's total shares outstanding. If multiple share classes have been combined, the number of total shares outstanding will be multiplied by the primary exchange close price and used to determine the company's total market capitalization. In cases where the common stock share classes act independently of each other (e.g., tracking stocks), each class is considered for inclusion separately. Stocks must have a closing price at or above \$1.00 on their primary exchange or an eligible secondary exchange on the last trading day of May of each year to be eligible for inclusion in the Russell 3000<sup>®</sup> Index and the Russell 1000<sup>®</sup> Index, and consequently, the Russell 1000<sup>®</sup> Growth Index. In order to reduce unnecessary turnover, if an existing member's closing price is less than \$1.00 on the rank day in May, it will be considered eligible if the average of the daily closing prices from their primary exchange during the 30 days prior to the rank day is equal to or greater than \$1.00. If an existing member does not trade on the rank day, it must price at \$1.00 or above on another eligible U.S. exchange to remain eligible.

*Multiple Share Classes*

If an eligible company trades under multiple share classes or if a company distributes shares of an additional share class to its existing shareholders through a mandatory corporate action, each share class will be reviewed independently for inclusion. Share classes in addition to the primary vehicle (the pricing vehicle) that have a total market capitalization larger than the smallest company in the Russell 3000E<sup>™</sup> Index, an average daily dollar trading value that exceeds that of the global median, and a float greater than 5% of shares available in the market place are eligible for inclusion.

The pricing vehicle will generally be designated as the share class with the highest two-year trading volume as of the rank day. In the absence of two years' worth of data, all available data will be used for this calculation. If the difference between trading volumes for each share class is less than 20%, the share class with the most available shares outstanding will be used as the pricing vehicle. At least 100 day trading volume is necessary to consider the class as a pricing vehicle for existing members. New members will be analyzed on all available data, even if that data is for less than 100 days.

#### Determining Style

Russell uses a non-linear probability method to determine whether a stock included in the Russell 1000 Index is included in the Russell 1000<sup>®</sup> Growth Index, the Russell 1000<sup>®</sup> Value Index, or both. The term "probability" is used to indicate the degree of certainty that a stock belongs in one of those indexes.

Russell uses three variables to determine whether a stock exhibits growth characteristics, value characteristics, or both. One variable, book-to-price ratio, is used to represent a stock's value characteristics, while two variables, I/B/E/S forecast medium-term growth (2 year) and sales per share historical growth (5 year) are used to represent a stock's growth characteristics. Stocks included in the Russell 1000<sup>®</sup> Index are given a ranking for each variable and these rankings are converted to standardized units, where the value variable represents 50% of the score and the two growth variables represent the remaining 50%. They are then combined to produce a composite value score (CVS). Stocks included in the Russell 1000<sup>®</sup> Index are then ranked by their CVS, and a probability algorithm is applied to the CVS distribution to assign growth and value weights or probabilities to each stock. In general, a stock with a higher CVS is considered a value stock, a stock with a lower CVS is considered a growth stock and a stock with a CVS in the middle range is considered to have both growth and value characteristics.

---

## **Table of Contents**

### *Description of non-linear probability algorithm*

Stock A, in Figure 1, is a security with 20% of its available shares assigned to the Russell 1000<sup>®</sup> Value Index and the remaining 80% assigned to the Russell 1000<sup>®</sup> Growth Index. The growth and value probabilities will always sum to 100%. Hence, the sum of a stock's market capitalization in the Russell 1000<sup>®</sup> Value Index and the Russell 1000<sup>®</sup> Growth Index will always equal its market capitalization in the Russell 1000<sup>®</sup> Index.

In Figure 1, the quartile breaks are calculated such that approximately 25% of the available market capitalization lies in each quartile. Stocks at the median are divided 50% in the Russell 1000<sup>®</sup> Value Index and 50% in the Russell 1000<sup>®</sup> Growth Index. Stocks below the first quartile are 100% in the Russell 1000<sup>®</sup> Growth Index. Stocks above the third quartile are 100% in the Russell 1000<sup>®</sup> Value Index. Stocks falling between the first and third quartile breaks are in both the Russell 1000<sup>®</sup> Value Index and the Russell 1000<sup>®</sup> Growth Index to varying degrees depending on how far they are above or below the median and how close they are to the first or third quartile breaks, subject to the 5% rule and the banding rule, as described below.

### *5% rule*

If a stock's initial weight is more than 95% in either the Russell 1000<sup>®</sup> Value Index or the Russell 1000<sup>®</sup> Growth Index, Russell increases its weight to 100% in that index and removes the stock altogether from the other index. As a result of the 5% rule, roughly 70% of the available market capitalization of the Russell 1000<sup>®</sup> Index is classified as all-growth or all-value. The remaining 30% of stocks have some portion of their market capitalization allocated to the Russell 1000<sup>®</sup> Value Index and the Russell 1000<sup>®</sup> Growth Index, depending on their relative distance from the median value score.

### *Banding rule*

In an effort to mitigate unnecessary turnover, Russell implements a banding methodology at the CVS level. If (i) a company's CVS change from the previous year is less than plus or minus 0.10 **and** (ii) the company remains in the Russell 1000<sup>®</sup> Index, then the CVS will not be updated during the next reconstitution process. Keeping the CVS static for these companies does not mean the probability (value/growth) will remain unchanged in all cases due to the relation of a CVS score to the overall index. In the past, this banding methodology has reduced turnover caused by smaller, less meaningful movements while continuing to allow the larger, more meaningful changes to occur.

### *Market capitalization*

The market capitalization of the Russell 1000<sup>®</sup> Growth Index may not equal 50% of the Russell 1000<sup>®</sup> Index because asymmetry in the capitalization distributions within the second and third quartiles may result in a skewed distribution of CVS. When CVS is normally distributed, each of the Russell 1000<sup>®</sup> Value Index and the Russell 1000<sup>®</sup> Growth Index will equal 50% of the Russell 1000<sup>®</sup> Index.

### *Missing values, negative values, or low coverage*

Stocks with missing or negative values for their book-to-price ratio, missing values for I/B/E/S medium-term growth (2 year) (negative I/B/E/S medium-term growth is valid), or missing sales per share historical growth (5 year) (6 years of quarterly numbers are required), are allocated by using the mean value score of the Russell Global Sectors industry,

subsector, or sector group into which the company falls in the Russell 1000<sup>®</sup> Index. Each missing (or in the case of book-to-price ratio, negative) variable is substituted with the mean value score of the industry, subsector or sector group independently. An industry must have five members or the substitution reverts to the subsector, and so forth to the sector.

S-58

---

## Table of Contents

In addition, a weighted value score is calculated for securities with low analyst coverage for I/B/E/S medium-term growth. For securities with coverage by a single analyst, 2/3 of the industry, subsector, or sector group value score is weighted with 1/3 the security's independent value score. For those securities with coverage by 2 analysts, 2/3 of the independent security's value score is used and only 1/3 of the industry, subsector, or sector group is weighted. For those securities with at least three analysts contributing to the I/B/E/S medium-term growth variable, 100% of the independent security's value score is used.

### Annual Reconstitution

The Russell 1000<sup>®</sup> Index and the Russell 1000<sup>®</sup> Growth Index are reconstituted annually by Russell to reflect changes in the marketplace. The list of companies is ranked based on total market capitalization on the last trading day in May, with the actual reconstitution occurring on the final Friday of June each year, unless the final Friday in June is the 29th or 30th, in which case reconstitution will occur on the preceding Friday. A full calendar for reconstitution is made available each spring. Changes in the constituents are preannounced and subject to change if any corporate activity occurs or if any new information is received prior to release.

A company's total shares are multiplied by the primary exchange close price of the pricing vehicle and used to determine the company's total market capitalization for the purpose of ranking of companies and determination of index membership. If no volume exists on the primary exchange on the rank day, the last trade price from an eligible secondary exchange will be used where volume exists (using the lowest trade price above \$1.00 if multiple secondary markets exist). The company's rank will be determined based on the cumulative market capitalization. As of the June 2016 reconstitution, any share class not qualifying for eligibility independently will not be aggregated with the pricing vehicle within the available shares calculation.

For mergers and spin-offs that are effective between the rank day and the Friday prior to annual reconstitution in June, the market capitalizations of the impacted securities are recalculated and membership is reevaluated as of the effective date of the corporate action. For corporate events that occur during the final week of reconstitution (during which reconstitution is finalized Friday after U.S. market close), market capitalizations and memberships will not be reevaluated. Non-index members that have been considered ineligible as of rank day will not be reevaluated in the event of a subsequent corporate action that occurs between rank day and the reconstitution effective date.

### *Index Calculation and Capitalization Adjustments*

As a capitalization-weighted index, the Russell 1000<sup>®</sup> Growth Index reflects changes in the capitalization, or market value, of the index stocks relative to the capitalization on a base date. The current Russell 1000<sup>®</sup> Growth Index value is the compounded result of the cumulative daily (or monthly) return percentages, where the starting value of the index is equal to the base value (100) and base date (December 31, 1990). Returns between any two dates can then be derived by dividing the ending period index value (IV1) by the beginning period (IV0) index value, so that the return equals  $[(IV1 / IV0) - 1] * 100$ . To calculate the index value, the market values of the index stocks are added together to arrive at the total market capitalization of the index. The market value of an index stock is equal to the *product* of (i) the price of such stock *times* (ii) the number of available shares *times* (iii) the stock's growth weight or probability. The last sale prices will be used for exchange traded and NASDAQ stocks. In the event of a market disruption resulting in any index stock price being unavailable, Russell will generally use the last reported price for such index stock to calculate the index. The index is the total return version of the Russell 1000<sup>®</sup> Growth Index, which means that cash dividends are reinvested across the index on the dividend ex-date as part of the index calculation, as described below under *Corporate Actions Affecting the Index*.

The weight of a stock included in the Russell 1000<sup>®</sup> Growth Index is equal to its weight in the Russell 1000<sup>®</sup> Index *multiplied* by its growth weight or probability . Constituent stocks of the Russell 1000<sup>®</sup> Index are weighted by their free-float market capitalization, which is calculated by multiplying the primary closing price by the number of free-float shares. Free-float shares are shares that are available to the public for purchase as determined by Russell. Adjustments to shares are reviewed quarterly (including at reconstitution) and for major corporate actions such as mergers.

The following are excluded from free float: shares directly owned by state, regional, municipal and local governments (excluding shares held by independently managed pension schemes for governments); shares held by sovereign wealth funds where each holding is 10% or greater of the total number of shares in issue; shares held by directors, senior executives and managers of the company, and by their family and direct relations, and by companies with which they are affiliated; shares held within employee share plans; shares held by public companies or by non-listed subsidiaries of public companies; shares held by founders, promoters, former directors, founding venture capital and private equity firms, private companies and individuals (including employees) where the holding is 10% or greater of the total number of shares in issue; all shares where the holder is subject to a lock-in clause (for the duration of that clause, after which free float changes resulting from the expiration of a lock-in clause will be implemented at the next quarterly review subsequent to there being a minimum of 20 business days between the expiration date of such lock-in clause and the Tuesday before the first Friday of the review month; if the previously locked-in shares are sold by way of a corporate event (such as a

---

**Table of Contents**

secondary offering), any change to the free float will be applied T+2 following completion and therefore will not be subject to the minimum 20 business day rule); shares held by an investor, investment company or an investment fund that is actively participating in the management of a company or is holding shares for publicly announced strategic reasons, or has successfully placed a current member to the board of directors of a company; and shares that are subject to ongoing contractual agreements (such as swaps) where they would ordinarily be treated as restricted. In addition, while portfolio holdings such as pension funds, insurance funds or investment companies will generally not be considered as restricted from free float, where a single portfolio holding is 30% or greater it will be regarded as strategic and therefore restricted (and will remain restricted until the holding falls below 30%).

*Corporate Actions Affecting the Index*

Russell adjusts the index on a daily basis in response to certain corporate actions and events. Therefore, a company's membership in the index and its weight in the index can be impacted by these corporate actions. The adjustment is applied based on sources of public information, including press releases and Securities and Exchange Commission filings. Prior to the completion of a corporate action or event, Russell estimates the effective date. Russell will then adjust the anticipated effective date based on public information until the date is considered final. Depending on the time on a given day that an action is determined to be final, Russell will generally either (1) apply the action before the open on the ex-date or (2) apply the action after providing appropriate notice. If Russell has confirmed the completion of a corporate action, scheduled to become effective subsequent to a rebalance, the event may be implemented in conjunction with the rebalance to limit turnover, provided appropriate notice can be given. Russell applies the following methodology guidelines when adjusting the index in response to corporate actions and events:

*No Replacement Rule* Securities that are deleted from the index between reconstitution dates, for any reason (e.g., mergers, acquisitions or other similar corporate activity) are not replaced. Thus, the number of securities in the index over the past year will fluctuate according to corporate activity.

*Mergers and Acquisitions*

Adjustments due to mergers and acquisitions are applied to the index after the action is determined to be final. In the event that a constituent is being acquired for cash or is delisted subsequent to an index review, such constituent will be removed from the index in conjunction with the index review, assuming that the action is determined to be final and a minimum of two days' notice can be provided.

**Between constituents:** When mergers and acquisitions take place between companies that are both constituents of a Russell index for cash, the target company is deleted and shares of the acquiring stock are increased according to the offer terms. When mergers and acquisitions take place between companies that are both constituents of a Russell index for stock, the target company is deleted from the index at the last traded price.

**Between a constituent and a non-constituent:** If the target company is a member of the Russell 1000® Growth Index, it is deleted from the index and the acquiring company will be included initially in the index provided it is eligible in all other respects at the time of the merger, regardless of previous eligibility screenings. If the acquiring company is deemed eligible it will be added to the index on the effective date and the opening price will be calculated using the offer terms.

Given sufficient market hours after the confirmation of a merger or acquisition, Russell effects the action after the close on the last day of trading of the target company, or at an appropriate time once the transaction has been deemed to be final.

*Rights Offerings* Rights offered to shareholders are reflected in the index only if the subscription price of the rights is at a discount to the market price of the stock. Provided that Russell has been alerted to the rights offer prior to the ex-date, it will adjust the price of the stock for the value of the rights and increased shares according to the terms of the offering before the open on the ex-date.

*Spin-offs* Spun-off companies are added to the parent company's index if the parent company's market value is reduced simultaneously per the spin-off valuation. Spun-off companies are added to the index at the same time as they are spun-off from their parent company on the ex-date of the distribution.

*Initial Public Offerings* Eligible IPOs are added to the Russell 1000® Index based on total market capitalization ranking within the market-adjusted capitalization breaks established at the most recent annual reconstitution.

An IPO of additional share classes will be considered for eligibility and must meet the same eligibility criteria for all other multiple share classes. If at the time of the IPO the additional share class does not meet the eligibility criteria for separate index membership, it will not be added to the index and will subsequently be reviewed for index membership during the next annual reconstitution.

Once IPO additions have been announced, an IPO may be added to the index prior to the previously announced schedule, if a corporate action has deemed this to be appropriate and notice can be provided (e.g. an index member automatically receives shares via a stock distribution into a projected IPO add).



---

**Table of Contents**

*Tender Offers* A company acquired as a result of a tender offer is removed when (i) (a) offer acceptances reach 90%; (b) shareholders have validly tendered and the shares have been irrevocably accepted for payment; and (c) all pertinent offer conditions have been reasonably met and the acquirer has not explicitly stated that it does not intend to acquire the remaining shares; (ii) where offer acceptances are below 90%, there is reason to believe that the remaining free float is under 5% based on information available at the time; or (iii) following completion of the offer the acquirer has stated intent to finalize the acquisition via a short-form merger, squeeze-out, top-up option or any other compulsory mechanism.

Where the conditions for index deletion are not met, Russell may implement a free float change based on the reported acceptance results at the expiration of the initial, subsequent or final offer period where (i) the minimum acceptance level as stipulated by the acquiror is met; (ii) shareholders have validly tendered and the shares have been irrevocably accepted for payment; (iii) all pertinent offer conditions have been reasonably met and (iv) the change to the current float factor is greater than 3%. A minimum two day notice period of the change is generally provided. If the offer includes a stock consideration, the acquiring company's shares will be increased proportionate to the free float change of the target company. If the target company's free float change is greater than 3%, the associated change to the acquiring company's shares will be implemented regardless of size. Additionally, if the change to the target company is less than 3%, then no change will be implemented to the target or the acquiring company at the time of the event, regardless of any change to the acquiring company's shares. The target company will then be deleted as a second-step, if the conditions for deletion are achieved at the expiration of a subsequent offer period.

*Delisted and Suspended Stocks* A stock will be deleted as a constituent if it is delisted from all eligible exchanges, becomes bankrupt, files for bankruptcy protection, is insolvent or is liquidated, or where evidence of a change in circumstances makes it ineligible for index inclusion. If, however, a stock is suspended, Russell will determine its treatment as follows:

if a constituent is declared bankrupt without any indication of compensation to shareholders, the last traded price will be adjusted to zero value and the constituent will be removed from the index with T+2 notice;

in all other cases, a constituent will continue to be included in the index for a period of up to 20 business days at its last traded price;

if a constituent continues to be suspended at the end of the 20 business day period, it will be subject to review and a decision will be taken to either allow the constituent to remain in the index for a further period of up to 20 business days or to remove it at zero value. In making this determination, Russell will take into account the stated reasons for the suspension. These reasons may include announcements made by the company regarding a pending acquisition or restructuring, and any stated intentions regarding a date for the resumption of trading. This procedure will be repeated at successive 20 business day intervals thereafter until either trading recommences or the suspension period reaches 80 business days;

if the suspension period reaches 80 business days, Russell will provide notice that the constituent will be removed at zero value following the expiry of at least 40 business days;

in certain limited circumstances where the index weight of the constituent is significant and Russell determines that a market-related value can be established for the suspended constituent, for example because similar company securities continue to trade, deletion may take place at the market-related value instead. In such circumstances, Russell will set out its rationale for the proposed treatment of the constituent at the end of the 80 business day period;

if, following the end of the 80 business day period, a suspended constituent resumes trading before the Wednesday before the first Friday of March, June, September or December, the deletion notice will be rescinded and the constituent will be retained in the index. If the constituent resumes trading after these dates but before the review effective date, the constituent will continue to be removed from the index as previously announced but in these circumstances the deletion may instead be implemented at market value; and

if a constituent has been removed from the index and trading is subsequently restored, the constituent will only be reconsidered for inclusion after a period of 12 months from its deletion. For the purposes of index eligibility, it will be treated as a new issue.

*Bankruptcy and Voluntary Liquidations* Companies that file for a Chapter 7 liquidation bankruptcy or have filed a liquidation plan will be removed from the index at the time of the bankruptcy filing (except when shareholder approval is required to finalize the liquidation plan, in which case the company will be removed once shareholder approval has been granted); whereas companies filing for a Chapter 11 reorganization bankruptcy will remain a member of the index, unless the company is delisted from the primary exchange, in which case normal delisting rules apply. If a company files for bankruptcy, is delisted and it can be confirmed that it will not trade on any market, including OTC, Russell may remove the stock at a nominal price of \$0.0001.

---

**Table of Contents**

*Stock Distributions and distributions in specie* A price adjustment for stock distributions is applied on the ex-date of the distribution. Where Russell is able to value a distribution in specie prior to the ex-date, a price adjustment is made to the company paying the dividend at the open on the ex-date. If no valuation of the distribution exists prior to the ex-date, no price adjustment is applied. Where the company whose holders are receiving the distribution is an index member, its shares will be increased according to the terms of the distribution. If such company is not an index member, the distributed shares will be added to the index until they have been settled and have listed, at which point they will be removed at the last traded price giving appropriate notice.

*Regular Cash Dividends* Regular cash dividends are those paid to shareholders out of a company's profits or reserves. These cash dividends impact the total return of the index and are reinvested across the index on the dividend ex-date as part of the total return calculation of the index.

*Special Cash Dividends* If a constituent pays out a special cash dividend, the price of the stock is adjusted to deduct the dividend amount before the open on the ex-date. However, special cash dividends are not included as part of the total return calculation of the index (i.e., special cash dividends are not reinvested across the index as regular cash dividends are).

*Updates to Shares Outstanding and Free Float* Russell reviews the index quarterly for updates to shares outstanding and to free floats used in calculating the index. The changes are implemented quarterly in March, June, September and December after the close on the third Friday of such month. The June reconstitution will be implemented on the last Friday of June (unless the last Friday occurs on the 29th or 30th of the month, in which case reconstitution will occur on the Friday prior).

In March, September and December shares outstanding and free floats are updated to reflect (i) changes greater than 1% for cumulative shares in issue changes and (ii) changes greater than 3% for cumulative free float changes. In addition, a constituent with a free float of 15% or below will not be subject to the 3% change threshold and will instead be updated if the change is greater than 1%. Updates to shares outstanding and free floats will be implemented each June regardless of size (i.e., the percentage change thresholds above will not be applied). Russell implements the June updates using data sourced primarily from the companies' publicly available information filed with the Securities and Exchange Commission.

Outside of the quarterly update cycle, outstanding shares and free float will be updated with at least two days' notice if prompted by primary or secondary offerings if (i) there is a USD \$1 billion investable market capitalization change related to a primary/secondary offering or (ii) there is a resultant 5% change in index shares related to a primary or secondary offering and a USD \$250 million investable market capitalization change. These changes are implemented after the close on the day that the subscription period closes, assuming two days' notice can be provided. If two days' notice cannot be provided prior to the end of the subscription period, the change will still proceed with two days' notice and will be implemented at the earliest opportunity. If discovery of the event occurs more than two days after the close of the subscription period, the changes are deferred until the quarterly review cycle.

If a company distributes shares of an additional share class to its existing shareholders through a mandatory corporate action, the additional share class will be evaluated for separate index membership. The new share class will be deemed eligible if the market capitalization of the distributed shares meets the minimum size requirement (the market capitalization of the smallest member of the Russell 3000E Index from the previous rebalance as adjusted for performance to date). If the additional share class is not eligible at the time of distribution, it will not be added to the index.

*License Agreement between FTSE Russell and GS Finance Corp.*

FTSE Russell and Goldman Sachs International expect to enter into a non-exclusive license agreement, granting GS Finance Corp., in exchange for a fee, permission to use the Russell 1000<sup>®</sup> Growth Index in connection with the offer and sale of the notes. GS Finance Corp. is not affiliated with FTSE Russell; the only relationship between FTSE Russell and GS Finance Corp. is the licensing of the use of the Russell 1000<sup>®</sup> Growth Index (a trademark of FTSE Russell) and trademarks relating to the Russell 1000<sup>®</sup> Growth Index.

GS Finance Corp. does not accept any responsibility for the calculation, maintenance or publication of the Russell 1000<sup>®</sup> Growth Index or any successor index.

The notes have been developed solely by GS Finance Corp. The notes are not in any way connected to or sponsored, endorsed, sold or promoted by the London Stock Exchange Group plc and its group undertakings (collectively, the LSE Group ). FTSE Russell is a trading name of certain of the LSE Group companies.

All rights in the Russell 1000<sup>®</sup> Growth Index (the Index ) vest in FTSE Russell. FTSE Russell Russell 1000<sup>®</sup> Growth Index and Russell 3000<sup>®</sup> Index are trademarks of FTSE Russell and are used by any other LSE Group company under license.

**Table of Contents**

The Index is calculated by or on behalf of FTSE International Limited or its affiliate, agent or partner. The LSE Group does not accept any liability whatsoever to any person arising out of (a) the use of, reliance on or any error in the Index or (b) investment in or operation of the notes. The LSE Group makes no claim, prediction, warranty or representation either as to the results to be obtained from the notes or the suitability of the Index for the purpose to which it is being put by GS Finance Corp.

S-63

**Table of Contents**

**Historical Closing Levels of the Index**

The closing level of the index has fluctuated in the past and may, in the future, experience significant fluctuations. Any historical upward or downward trend in the closing level of the index during the period shown below is not an indication that the index is more or less likely to increase or decrease at any time during the life of your notes.

**You should not take the historical closing levels of the index as an indication of the future performance of the index.** We cannot give you any assurance that the future performance of the index or the index stocks will result in you receiving an amount greater than the outstanding face amount of your notes, or that you will not incur a loss on your investment, on the stated maturity date or upon redemption.

Neither we nor any of our affiliates make any representation to you as to the performance of the index. Before investing in the offered notes, you should consult publicly available information to determine the index levels between the date of this prospectus supplement and the date of your purchase of the offered notes. The actual performance of the index over the life of the offered notes, as well as the amount payable on your notes may bear little relation to the historical levels shown below.

The graph below shows the daily historical closing levels of the index from November 28, 2008 through November 28, 2018. We obtained the closing levels in the graph below from Bloomberg Financial Services, without independent verification. Although the official closing levels of the index are published to six decimal places by the index sponsor, Bloomberg Financial Services reports the levels of the index to fewer decimal places.

**Historical Performance of the Russell 1000® Growth Total Return Index**

S-64

**Table of Contents**

**Performance of 3-Month USD LIBOR Reflected in the Financing Fee Rate**

The graph below illustrates the historical levels of the 3-month USD LIBOR rate from November 28, 2008 through November 28, 2018. The level of the 3-month USD LIBOR rate has fluctuated in the past and may, in the future, experience significant fluctuations. Any historical upward or downward trend in the level of the 3-month USD LIBOR rate during the period shown below is not an indication that the level of the 3-month USD LIBOR rate is more or less likely to increase or decrease at any time during the life of the notes. See [U.K. Regulators Will No Longer Persuade or Compel Banks to Submit Rates for Calculation of LIBOR After 2021; Interest Rate Benchmark May Be Discontinued and Additional Risk Factors Specific to Your Notes](#) [Regulation and Reform of Benchmarks](#), Including LIBOR and Other Types of Benchmarks, May Cause such [Benchmarks](#) to Perform Differently Than in the Past, or to Disappear Entirely, or Have Other Consequences Which Cannot be Predicted for more information about 3-month USD LIBOR.

**You should not take the historical level of the 3-month USD LIBOR rate as an indication of future levels of the 3-month USD LIBOR rate.**

Neither we nor any of our affiliates make any representation to you as to the performance of the 3-month USD LIBOR rate. The actual levels of the 3-month USD LIBOR rate during the term of the notes may bear little relation to the historical levels of the 3-month USD LIBOR rate shown below.

We obtained the 3-month USD LIBOR rates shown in the graph below from Reuters, without independent verification.

**Historical Performance of the 3-month USD LIBOR**

S-65

**Table of Contents**

**SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES**

The following section supplements and, to the extent it is inconsistent with, replaces the discussion contained in the accompanying prospectus under the caption "United States Taxation".

The following is a discussion of the material U.S. federal income tax consequences of ownership and disposition of the notes. It applies to you only if you purchase a note for cash and hold it as a capital asset within the meaning of Section 1221 of the U.S. Internal Revenue Code of 1986, as amended (the "Internal Revenue Code").

The following section is the opinion of Sidley Austin LLP, counsel to GS Finance Corp. and The Goldman Sachs Group, Inc. In addition, it is the opinion of Sidley Austin LLP that the characterization of the notes for U.S. federal income tax purposes that will be required under the terms of the notes, as discussed below, is a reasonable interpretation of current law.

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 tax exempt organization;

a partnership;

a regulated investment company;

an accrual method taxpayer subject to special tax accounting rules as a result of its use of financial statements;

a person that owns a note as a hedge or that is hedged against interest rate risks;

a person that owns a note 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. Although this section is based on the Internal Revenue Code, its legislative history, existing and proposed regulations under the Internal Revenue Code, published rulings and court decisions, all as currently in effect, no statutory, judicial or administrative authority directly addresses how your notes should be treated for U.S. federal income tax purposes, and as a result, the U.S. federal income tax consequences of your investment in your notes are uncertain. Moreover, these laws are subject to change, possibly on a retroactive basis.

*You should consult your tax advisor concerning the U.S. federal income tax and any other applicable tax consequences of your investments in the notes, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.*

### **United States Holders**

This section applies to you only if you are a United States holder that holds your notes as a capital asset for tax purposes. You are a United States holder if you are a beneficial owner of each of your notes and you are:

a citizen or resident of the United States;

a domestic corporation;

an estate whose income is subject to U.S. 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.

*Tax Treatment.* You will be obligated pursuant to the terms of the notes in the absence of a change in law, an administrative determination or a judicial ruling to the contrary to characterize your notes for all tax purposes as pre-paid derivative contracts in respect of the index. Except as otherwise stated below, the discussion herein assumes that the notes will be so treated.

Subject to the discussion under **Possible Taxable Event** below, you should not be required to recognize taxable income over the term of the notes prior to maturity, other than pursuant to a sale, exchange or redemption of the notes as described below.

Upon the sale, exchange, redemption or maturity of your notes, you should recognize capital gain or loss equal to the difference, if any, between the amount of cash you receive at such time and your tax basis in your notes. Subject to the discussion under **Possible Taxable Event** below, your tax basis in the notes will generally be equal to the amount that you paid for the notes. If you hold your notes for more than one year, the gain or loss generally will be long-term capital gain or loss. If you hold your notes for one year or less, the gain or loss generally will be short-term capital gain or loss. Short-term capital gains are generally subject to tax at the marginal tax rates applicable to ordinary income.

---

**Table of Contents**

*Possible Taxable Event.* In the event of a rebalancing of the index or other change in its composition, a change in the methodology by which the index is calculated, a substitution of the index or a similar event resulting in a change in the manner in which the amount due on a note is determined, it is possible that the notes could be treated, in whole or part, as terminated and reissued for U.S. federal income tax purposes. In such a case, you might be required to recognize gain or loss (subject to the possible application of the wash sale rules) with respect to the notes. In addition, your tax basis and holding period for your notes would be affected.

**No statutory, judicial or administrative authority directly discusses how your notes should be treated for U.S. federal income tax purposes. As a result, the U.S. federal income tax consequences of your investment in the notes are uncertain and alternative characterizations are possible. Accordingly, we urge you to consult your tax advisor in determining the tax consequences of an investment in your notes in your particular circumstances, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.**

*Alternative Treatments.* There is no judicial or administrative authority discussing how your notes should be treated for U.S. federal income tax purposes. Therefore, the Internal Revenue Service might assert that a treatment other than that described above is more appropriate. For example, the Internal Revenue Service could treat your notes as a single debt instrument subject to special rules governing contingent payment debt instruments. Under those rules, the amount of interest you are required to take into account for each accrual period would be determined by constructing a projected payment schedule for the notes and applying rules similar to those for accruing original issue discount on a hypothetical noncontingent debt instrument with that projected payment schedule. This method is applied by first determining the comparable yield — i.e., the yield at which we would issue a noncontingent fixed rate debt instrument with terms and conditions similar to your notes — and then determining a payment schedule as of the issue date that would produce the comparable yield. These rules may have the effect of requiring you to include interest in income in respect of your notes prior to your receipt of cash attributable to that income.

If the rules governing contingent payment debt instruments apply, any gain you recognize upon the sale, exchange, redemption or maturity of your notes would be treated as ordinary interest income. Any loss you recognize at that time would be ordinary loss to the extent of interest you included as income in the current or previous taxable years in respect of your notes, and, thereafter, capital loss.

If the rules governing contingent payment debt instruments apply, special rules would apply to a person who purchases notes at a price other than the adjusted issue price as determined for tax purposes.

It is also possible that your notes could be treated in the manner described above, except that any gain or loss that you recognize at maturity or upon redemption would be treated as ordinary gain or loss. You should consult your tax advisor as to the tax consequences of such characterization and any possible alternative characterizations of your notes for U.S. federal income tax purposes.

It is possible that the Internal Revenue Service could seek to characterize your notes in a manner that results in tax consequences to you that are different from those described above. You should consult your tax advisor as to the tax consequences of any possible alternative characterizations of your notes for U.S. federal income tax purposes.

***Possible Change in Law***

On December 7, 2007, the Internal Revenue Service released a notice stating that the Internal Revenue Service and the Treasury Department are actively considering issuing guidance regarding the proper U.S. federal income tax treatment of an instrument such as the notes, including whether holders should be required to accrue ordinary income on a

current basis and whether gain or loss should be ordinary or capital. It is not possible to determine what guidance they will ultimately issue, if any. It is possible, however, that under such guidance, holders of the notes will ultimately be required to accrue income currently and this could be applied on a retroactive basis. The Internal Revenue Service and the Treasury Department are also considering other relevant issues, including whether foreign holders of such instruments should be subject to withholding tax on any deemed income accruals and whether the special constructive ownership rules of Section 1260 of the Internal Revenue Code might be applied to such instruments. Holders are urged to consult their tax advisors concerning the significance, and the potential impact, of the above considerations. Except to the extent otherwise provided by law, we intend to continue treating the notes for U.S. federal income tax purposes in accordance with the treatment described above under Tax Treatment unless and until such time as Congress, the Treasury Department or the Internal Revenue Service determine that some other treatment is more appropriate. You are urged to consult your tax advisor as to the possibility that any legislative or administrative action may adversely affect the tax treatment and the value of your notes.

S-67

## **Table of Contents**

Furthermore, in 2007, legislation was introduced in Congress that, if enacted, would have required holders that acquired instruments such as your notes after the bill was enacted to accrue interest income over the term of such instruments even though there will be no interest payments over the term of such instruments. It is not possible to predict whether a similar or identical bill will be enacted in the future, or whether any such bill would affect the tax treatment of your notes.

It is impossible to predict what any such legislation or administrative or regulatory guidance might provide, and whether the effective date of any legislation or guidance will affect notes that were issued before the date that such legislation or guidance is issued. You are urged to consult your tax advisor as to the possibility that any legislative or administrative action may adversely affect the tax treatment of your notes.

### ***Backup Withholding and Information Reporting***

Please see the discussion under **United States Taxation Taxation of Debt Securities Backup Withholding and Information Reporting United States Holders** in the accompanying prospectus for a description of the applicability of the backup withholding and information reporting rules to payments made on your notes.

### **United States Alien Holders**

This section applies to you only if you are a United States alien holder. You are a United States alien holder if you are the beneficial owner of notes and are, for U.S. federal income tax purposes:

a nonresident alien individual;

a foreign corporation; or

an estate or trust that in either case is not subject to U.S. federal income tax on a net income basis on income or gain from the notes.

You will be subject to generally applicable information reporting and backup withholding requirements as discussed in the accompanying prospectus under **United States Taxation Taxation of Debt Securities Backup Withholding and Information Reporting United States Alien Holders** with respect to payments on your notes and, notwithstanding that we do not intend to treat the notes as debt for tax purposes, we intend to backup withhold on such payments with respect to your notes unless you comply with the requirements necessary to avoid backup withholding on debt instruments (in which case you will not be subject to such backup withholding) as set forth under **United States Taxation Taxation of Debt Securities United States Alien Holders** in the accompanying prospectus.

Subject to the discussions below under **Possible Withholding Under Section 871(m) of the Internal Revenue Code and Foreign Account Tax Compliance Act (FATCA) Withholding**, you generally should not be subject to U.S. federal withholding or income tax in respect of the notes, provided that (i) income in respect of the notes is not effectively connected with your conduct of a trade or business in the United States, and (ii) you comply with the applicable certification requirements.

If you are engaged in a U.S. trade or business, and if income from the notes is effectively connected with the conduct of that trade or business, you generally will be subject to regular U.S. federal income tax with respect to that income

in the same manner as if you were a United States holder, unless an applicable income tax treaty provides otherwise. If you are such a holder and you are a corporation, you should also consider the potential application of a 30% (or lower treaty rate) branch profits tax.

On December 7, 2007, the Internal Revenue Service released Notice 2008-2 soliciting comments from the public on various issues, including whether instruments such as your notes should be subject to withholding. It is therefore possible that rules will be issued in the future, possibly with retroactive effect, that would cause payments on your notes at maturity or upon redemption to be subject to withholding, even if you comply with certification requirements as to your foreign status.

As discussed above, alternative characterizations of the notes for U.S. federal income tax purposes are possible. Should an alternative characterization of the notes, by reason of a change or clarification of the law, by regulation or otherwise, cause payments at maturity or upon redemption with respect to the notes to become subject to withholding tax, we will withhold tax at the applicable statutory rate and we will not make payments of any additional amounts. Prospective United States alien holders of the notes should consult their tax advisors in this regard.

*Possible Withholding Under Section 871(m) of the Internal Revenue Code.* Section 871(m) of the Internal Revenue Code generally requires withholding at a rate of 30% (or lower treaty rate) in respect of amounts treated as attributable to dividends from U.S. stocks underlying financial instruments such as the notes ( dividend equivalents ).

Section 871(m) of the Internal Revenue Code provides certain exceptions to this withholding regime, including for instruments linked to Qualified Indices.

Based on certain representations made by us, in the opinion of our counsel, the index should be a Qualified Index for 2018 and, therefore, notes with a calculation time (generally, the time of pricing) in 2018 should generally not be subject

## **Table of Contents**

to withholding under Section 871(m). However, this determination is required to be made annually, and therefore the treatment of notes with a calculation time in a year after 2018 will generally depend on whether the index is a Qualified Index as of the beginning of the relevant year. If a note is treated as being reissued for U.S. federal income tax purposes (for example, as discussed under United States Holders Possible Taxable Event above), it would be required to be retested for purposes of Section 871(m). Our determination regarding Section 871(m) is not binding on the Internal Revenue Service, and the Internal Revenue Service may disagree with this determination.

In the event that in the future the index does not constitute a Qualified Index, notes issued (or deemed issued) thereafter could be subject to Section 871(m), in which case United States alien holders would be subject to a 30% withholding tax (which may be reduced under an applicable treaty) to the extent of any dividends attributable to the shares of U.S. equities reflected (indirectly) in their notes from time to time. Withholding in respect of dividend equivalents will, depending on the applicable withholding agent's circumstances, generally be required either (i) on the underlying dividend payment date or (ii) upon the date of maturity or other disposition of the note.

In addition, if notes issued in the future were subject to withholding under Section 871(m), because all notes will have the same CUSIP and ISIN numbers withholding agents may not be able to distinguish between notes that are subject to Section 871(m) withholding and those that are not. As a result, United States alien holders of exempt notes may not be able to establish to the satisfaction of their custodians or other withholding agents that their notes are exempt from Section 871(m) withholding.

We will not pay additional amounts with respect to any withholding taxes. The application of Section 871(m) to your notes is complex, and uncertainties exist regarding how the regulations will apply to your notes. Moreover, its application may depend on your particular circumstances, including whether you enter into other transactions with respect to an underlying component of the index. You should consult your tax adviser regarding the possible consequences to you under Section 871(m) in light of the issues discussed above.

### **Foreign Account Tax Compliance Act (FATCA) Withholding**

Pursuant to Treasury regulations, Foreign Account Tax Compliance Act (FATCA) withholding (as described in United States Taxation Taxation of Debt Securities Foreign Account Tax Compliance Act (FATCA) Withholding in the accompanying prospectus) will generally apply to obligations that are issued on or after July 1, 2014; therefore, the notes will generally be subject to FATCA withholding. However, according to published guidance, the withholding tax described above will not apply to payments of gross proceeds from the sale, exchange, redemption or other disposition of the notes made before January 1, 2019.

**Table of Contents****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 notes.*

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 notes are acquired by or on behalf of a Plan unless those notes are acquired and held pursuant to an available exemption. In general, available exemptions are: 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 notes, 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 notes, (b) none of the purchase, holding or disposition of the notes or the exercise of any rights related to the notes will result in a nonexempt 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 notes, 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 notes, 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 notes.

*If you are an insurance company or the fiduciary of a pension plan or an employee benefit plan (including a government plan, an IRA or a Keogh plan) and propose to invest in the notes, you should consult your legal counsel.*

---

**Table of Contents****SUPPLEMENTAL PLAN OF DISTRIBUTION**

GS Finance Corp. has agreed to sell to GS&Co., and GS&Co. has agreed to purchase from GS Finance Corp., the aggregate face amount of the eleventh reopened notes specified on the front cover of this prospectus supplement. The aggregate face amount of the original notes, the first reopened notes, the second reopened notes, the third reopened notes, the fourth reopened notes, the fifth reopened notes, the sixth reopened notes, the seventh reopened notes, the eighth reopened notes, the ninth reopened notes and the tenth reopened notes were purchased by GS&Co. in connection with the initial offering and sale of the original notes, the first reopened notes, the second reopened notes, the third reopened notes, the fourth reopened notes, the fifth reopened notes, the sixth reopened notes, the seventh reopened notes, the eighth reopened notes, the ninth reopened notes and the tenth reopened notes, respectively. The issue price, underwriting commission and net proceeds listed on the front cover page relate to the eleventh reopened notes we sell initially to GS&Co.

We will deliver the eleventh reopened notes against payment therefor in New York, New York on December 3, 2018. Under Rule 15c6-1 of the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade notes on any date prior to two business days before delivery will be required to specify alternative settlement arrangements to prevent a failed settlement.

The notes are listed on NYSE Arca under the ticker symbol `FRLG`. GS&Co. intends to sell the aggregate face amount of the offered notes specified on the front cover of this prospectus supplement on NYSE Arca or otherwise from time to time at market prices prevailing at the time of sale, at prices related to market prices or at negotiated prices. Subsequently, to the extent that the notes continue to be listed and an active secondary market in the notes exists, we expect that investors will purchase and sell the notes primarily in this secondary market. No assurance can be given as to the continuation of the listing for the life of the offered notes, or the liquidity or trading market for the offered notes.

In addition, we may, from time to time, in our sole discretion, choose to issue and sell additional amounts the offered notes having the same terms set forth in this prospectus supplement, but at issue prices and with underwriting discounts or commissions and net proceeds that differ from the amounts set forth on the front cover of this prospectus supplement. See [Description of Notes We May Offer](#) [Amounts That We May Issue](#) in the accompanying prospectus supplement and under [Description of Debt Securities We May Offer](#) [We May Issue Many Series and Tranches of Debt Securities](#) in the accompanying prospectus. We are not obligated to issue and sell additional notes at any time to GS&Co., and GS&Co. is not obligated to sell additional notes to investors or dealers at any time. If we discontinue issuances and sales of the notes, or if GS&Co. discontinues sales of the notes, the price and liquidity of the notes may be subject to significant distortions. See [Additional Risk Factors Specific to Your Notes](#) [We and GS&Co. Are Under No Obligation to Issue or Sell Additional Notes at Any Time, and If We and GS&Co. Do Sell Additional Notes, We May Limit Or Restrict Such Sales, and We and GS&Co. May Stop and Subsequently Resume Selling Additional Notes At Any Time](#) and [Any Limitation or Suspension on the Issuance or Sale of the Notes May Impact the Trading Price of the Notes, Including By Creating a Premium Over the Indicative Value of the Notes That May Be Reduced or Eliminated At Any Time](#).

GS Finance Corp. estimates that its share of the total offering expenses for the eleventh reopened notes, excluding underwriting commissions and marketing and licensing fees, will be approximately \$20,000.

In the future, GS&Co. or other affiliates of GS Finance Corp. may repurchase and resell the offered notes in market-making transactions, with resales being made at prices related to prevailing market prices at the time of resale or at negotiated prices. For more information about the plan of distribution and possible market-making activities, see



Plan of Distribution in the accompanying prospectus.

We have been advised by GS&Co. that it intends to make a market in the notes. However, neither GS&Co. nor any of our other affiliates 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 the notes.

Any notes which are the subject of the offering contemplated by this prospectus supplement, the accompanying prospectus and the accompanying prospectus supplement may not be offered, sold or otherwise made available to any retail investor in the European Economic Area. Consequently no key information document required by Regulation (EU) No 1286/2014 (the PRIIPs Regulation ) for offering or selling the notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation. For the purposes of this provision:

- (a) the expression retail investor means a person who is one (or more) of the following:
  - (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, MiFID II );  
or
  - (ii) a customer within the meaning of Directive 2002/92/EC (as amended, the Insurance Mediation Directive ), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
  - (iii) not a qualified investor as defined in Directive 2003/71/EC (as amended, the Prospectus Directive );  
and
- (b) the expression an offer includes the communication in any form and by any means of sufficient information on the terms of the offer and the notes to be offered so as to enable an investor to decide to purchase or subscribe for the notes.

**Table of Contents**

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State ) with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date ) an offer of the offered notes which are the subject of the offering contemplated by this prospectus supplement in relation thereto may not be made to the public in that Relevant Member State except that, with effect from and including the Relevant Implementation Date, an offer of such offered notes may be made to the public in that Relevant Member State:

- (a) at any time to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- (b) at any time to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the relevant dealer or dealers nominated by the Issuer for any such offer; or
- (c) at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of offered notes shall require us or any dealer to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an offer of notes to the public in relation to any notes in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the notes to be offered so as to enable an investor to decide to purchase or subscribe the notes, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State. The expression Prospectus Directive means Directive 2003/71/EC (as amended, including by Directive 2010/73/EU) and includes any relevant implementing measure in each Relevant Member State.

GS&Co. has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the offered notes in circumstances in which Section 21(1) of the FSMA does not apply to GS Finance Corp.; and
  - (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the notes in, from or otherwise involving the United Kingdom.
- No advertisement, invitation or document relating to the notes may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), if such advertisement, invitation or document is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the offered notes which are or are intended to be disposed of only to persons outside of Hong Kong or only to professional investors as defined in the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

The offered notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The offered notes may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

This prospectus supplement, along with the accompanying prospectus supplement and prospectus have not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement, along with the accompanying prospectus supplement and prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the offered notes may not be circulated or distributed, nor may the notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the offered notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferred except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2))

**Table of Contents**

of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) as specified in Section 276(7) of the SFA, or (5) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ( Regulation 32 ).

Where the offered notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for six months after that trust has acquired the offered notes under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than \$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

**Conflicts of Interest**

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

**Table of Contents**

**VALIDITY OF THE ELEVENTH REOPENED NOTES AND GUARANTEE**

In the opinion of Sidley Austin LLP, as counsel to GS Finance Corp. and The Goldman Sachs Group, Inc., when the eleventh reopened notes offered by this prospectus supplement have been executed and issued by GS Finance Corp., the related guarantee offered by this prospectus supplement has been executed and issued by The Goldman Sachs Group, Inc., and such eleventh reopened notes have been authenticated by the trustee pursuant to the indenture, and such eleventh reopened notes and the guarantee have been delivered against payment as contemplated herein, (a) such eleventh reopened notes will be valid and binding obligations of GS Finance Corp., enforceable in accordance with their terms, subject to applicable bankruptcy, insolvency and similar laws affecting creditors' rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith), provided that such counsel expresses no opinion as to the effect of fraudulent conveyance, fraudulent transfer or similar provision of applicable law on the conclusions expressed above and (b) such related guarantee will be a valid and binding obligation of The Goldman Sachs Group, Inc., enforceable in accordance with its terms, subject to applicable bankruptcy, insolvency and similar laws affecting creditors' rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith), provided that such counsel expresses no opinion as to the effect of fraudulent conveyance, fraudulent transfer or similar provision of applicable law on the conclusions expressed above. This opinion is given as of the date hereof and is limited to the laws of the State of New York and the General Corporation Law of the State of Delaware as in effect on the date hereof. In addition, this opinion is subject to customary assumptions about the trustee's authorization, execution and delivery of the indenture and the genuineness of signatures and certain factual matters, all as stated in the letter of such counsel dated July 10, 2017, which has been filed as Exhibit 5.6 to the registration statement on Form S-3 filed with the Securities and Exchange Commission by GS Finance Corp. and The Goldman Sachs Group, Inc. on July 10, 2017.

**Table of Contents**

**FORM OF NOTICE OF REDEMPTION AT THE OPTION OF THE HOLDER**

To: GS Finance Corp. - PIPG Operations

Email: gs-note-redemptions@ny.email.gs.com.

Subject: Large Cap Growth Index-linked ETNs due 2028, CUSIP No. 362273302

Ladies and Gentlemen:

The undersigned holder of GS Finance Corp.'s Medium-Term Senior Notes, Series E, Large Cap Growth Index-linked ETNs due 2028, CUSIP No. 362273302, fully and unconditionally guaranteed by The Goldman Sachs Group, Inc. (the "notes"), hereby irrevocably elects to exercise, with respect to the number of the notes indicated below, as of the date hereof, the right to have you redeem such notes on the redemption date specified below as described in the prospectus supplement no. 3,160 dated March 29, 2018 relating to the notes (the "prospectus supplement"). Terms not defined herein have the meanings given to such terms in the prospectus supplement.

In addition to any other requirements specified in the prospectus supplement being satisfied, the undersigned acknowledges that the notes specified below will not be redeemed unless (i) this notice of redemption at the option of the holder is delivered to you on a valuation date, (ii) you or your affiliate has responded acknowledging receipt of this notice on the date hereof, (iii) the DTC custodian with respect to the notes (specified below) has booked a delivery versus payment trade on the applicable redemption date with respect to the number of notes specified below at a price per \$100 face amount note determined in the manner described in the prospectus supplement, facing DTC 0005 and (iv) the DTC custodian delivers the trade as booked for settlement via DTC at or prior to 10:00 a.m. New York City time, on the redemption date.

Very truly yours,

[NAME OF HOLDER]

Name:

Title:

Telephone:

Fax:

Email:

Number of notes surrendered for redemption (minimum of \$500,000 face amount (5,000 notes)):

Applicable early redemption date: \_\_\_\_\_, 20\_\_\*

DTC # (and any relevant sub-account):

Contact Name:

Telephone:

Questions regarding the redemption requirements of your notes should be directed to [gs-note-redemptions@ny.email.gs.com](mailto:gs-note-redemptions@ny.email.gs.com).

\*Subject to adjustment as described in the prospectus supplement.

S-75

**Table of Contents**

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 supplement, the accompanying amendment no. 10 to prospectus supplement no. 3,160, the accompanying amendment no. 9 to prospectus supplement no. 3,160, the accompanying amendment no. 8 to prospectus supplement no. 3,160, the accompanying amendment no. 7 to prospectus supplement no. 3,160, the accompanying amendment no. 6 to prospectus supplement no. 3,160, the accompanying amendment no. 5 to prospectus supplement no. 3,160, the accompanying amendment no. 4 to prospectus supplement no. 3,160, the accompanying amendment no. 3 to prospectus supplement no. 3,160, the accompanying amendment no. 2 to prospectus supplement no. 3,160, the accompanying amendment no. 1 to prospectus supplement no. 3,160, the accompanying prospectus supplement no. 3,160, the accompanying prospectus supplement or the accompanying prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus supplement, the accompanying amendment no. 10 to prospectus supplement no. 3,160, the accompanying amendment no. 9 to prospectus supplement no. 3,160, the accompanying amendment no. 8 to prospectus supplement no. 3,160, the accompanying amendment no. 7 to prospectus supplement no. 3,160, the accompanying amendment no. 6 to prospectus supplement no. 3,160, the accompanying amendment no. 5 to prospectus supplement no. 3,160, the accompanying amendment no. 4 to prospectus supplement no. 3,160, the accompanying amendment no. 3 to prospectus supplement no. 3,160, the accompanying amendment no. 2 to prospectus supplement no. 3,160, the accompanying amendment no. 1 to prospectus supplement no. 3,160, the accompanying prospectus supplement no. 3,160, the accompanying prospectus supplement and the accompanying prospectus is an offer to sell only the notes offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus supplement, the accompanying amendment no. 10 to prospectus supplement no. 3,160, the accompanying amendment no. 9 to prospectus supplement no. 3,160, the accompanying amendment no. 8 to prospectus supplement no. 3,160, the accompanying amendment no. 7 to prospectus supplement no. 3,160, the accompanying amendment no. 6 to prospectus supplement no. 3,160, the accompanying amendment no. 5 to prospectus supplement no. 3,160, the accompanying amendment no. 4 to prospectus supplement no. 3,160, the accompanying amendment no. 3 to prospectus supplement no. 3,160, the accompanying amendment no. 2 to prospectus supplement no. 3,160, the accompanying amendment no. 1 to prospectus supplement no. 3,160, the accompanying prospectus supplement no. 3,160, the accompanying prospectus supplement and the accompanying prospectus is current only as of the respective dates of such documents.

## TABLE OF CONTENTS

Amendment No. 11 dated November 28, 2018 to Prospectus

Supplement No. 3,160 dated March 29, 2018

|   |      |
|---|------|
| <u>Summary Information</u>  | S-10 |
| <u>Hypothetical Examples</u>                                      | S-17 |
| <u>Additional Risk Factors Specific to Your Notes</u>             | S-28 |
| <u>Specific Terms of Your Notes</u>                               | S-42 |
| <u>Use of Proceeds</u>  | S-55 |
| <u>Hedging</u>  | S-55 |
| <u>The Index</u>  | S-56 |
| <u>Supplemental Discussion of Federal Income Tax Consequences</u> | S-66 |
| <u>Employee Retirement Income Security Act</u>                    | S-70 |
| <u>Supplemental Plan of Distribution</u>                          | S-71 |
| <u>Conflicts of Interest</u>                                      | S-73 |



|   |      |
|---|------|
| <u>Validity of the Eleventh Reopened Notes and Guarantee</u>    | S-74 |
| <u>Form of Notice of Redemption at the option of the holder</u> | S-75 |

Prospectus Supplement dated July 10, 2017

|  |      |
|--|------|
| Use of Proceeds                          | S-2  |
| Description of Notes We May Offer        | S-3  |
| Considerations Relating to Indexed Notes | S-15 |
| United States Taxation                   | S-18 |
| Employee Retirement Income Security Act  | S-19 |
| Supplemental Plan of Distribution        | S-20 |
| Validity of the Notes and Guarantees     | S-21 |

Prospectus dated July 10, 2017

|  |    |
|--|----|
| Available Information  | 2  |
| Prospectus Summary   | 4  |
| Risks Relating to Regulatory Resolution Strategies and Long-Term Debt Requirements                               | 8  |
| Use of Proceeds  | 11 |
| Description of Debt Securities We May Offer  | 12 |
| Description of Warrants We May Offer   | 45 |
| Description of Units We May Offer  | 60 |
| GS Finance Corp.   | 65 |
| Legal Ownership and Book-Entry Issuance  | 67 |
| Considerations Relating to Floating Rate Debt Securities   | 72 |
| Considerations Relating to Indexed Securities  | 73 |
| Considerations Relating to Securities Denominated or Payable in or Linked to a Non-U.S. Dollar Currency          | 74 |
| United States Taxation   | 77 |
| Plan of Distribution   | 92 |
| Conflicts of Interest  | 94 |
| Employee Retirement Income Security Act  | 95 |
| Validity of the Securities and Guarantees  | 95 |
| Experts  | 96 |
| Review of Unaudited condensed Consolidated Financial Statements by Independent Registered Public Accounting Firm | 96 |
| Cautionary Statement Pursuant to the Private Securities Litigation Reform Act of 1995                            | 96 |

**Table of Contents**

\$425,000,000\*

**GS Finance Corp.**

Large Cap Growth Index-Linked ETNs due 2028

guaranteed by

**The Goldman Sachs Group, Inc.**

**Goldman Sachs & Co. LLC**