GOLDMAN SACHS GROUP INC
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The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion. Dated March 1, 2019.

GS Finance Corp.

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Autocallable Motif Capital Artificial Intelligence 8 ER Index-Linked Notes due

guaranteed by

The Goldman Sachs Group, Inc.

The notes will not bear interest. Unless your notes are automatically called on any annual call observation date, the amount that you will be paid on your notes on the stated maturity date (expected to be April 9, 2026) will be based on the performance of the Motif Capital Artificial Intelligence 8 ER Index as measured from the trade date (expected to be March 26, 2019) to and including the determination date (expected to be March 26, 2026). If the final level on the determination date is greater than the initial level (set on the trade date), the return on your notes will be the index return (the percentage increase or decrease in the final level from the initial level) times 2. If the final level is equal to or less than the initial level, you will receive the face amount of your notes at maturity. The index measures the extent to which the stocks (including ADRs) and any money market position (described below) outperform 3-month USD LIBOR plus 0.75% per annum (accruing daily). If the index fails to outperform 3-month USD LIBOR plus 0.75% per annum (accruing daily) you will receive no return on your investment. LIBOR is being modified, see page S-24.

Your notes will be automatically called if the closing level of the index on any call observation date is greater than or equal to the applicable call level, resulting in a payment on the corresponding call payment date (the tenth business day after the call observation date) equal to the face amount of your notes plus the product of $1,000 times the applicable call return. See page S-4 for call observation dates, call levels and call returns.

The index attempts to track the common equity of U.S. and non-U.S. companies listed on U.S. exchanges that either develop or use artificial intelligence technology, subject to a limitation on volatility described below. The index rebalances annually and the stocks eligible for inclusion in the index are identified based solely on a relevance score determined by an established word search algorithm utilizing terms from the Association for Computing Machinery Computing Classification 2012 taxonomy. To be included in the index, a company must (i) be classified in the technology sector, (ii) have a minimum relevance score and (iii) meet minimum market capitalization, price, price availability and average daily dollar volume thresholds. If there are more than 100 eligible companies, only those with the 100 highest relevance scores are included in the index. The weight of each stock is determined by reference to its relevance score, market capitalization and average daily dollar volume, subject to minimum and maximum weight constraints of 0.1% and 5% of the index. For a full list of index stocks, see page S-53. There are very significant risks associated with the methodology used to select and weight index constituents. See pages S-22 and S-31.

As of the close of business on each index business day, realized volatility (measuring the degree of variation in the daily closing prices of stocks included in the index) is calculated using a 20 index business day look-back period. If such realized volatility exceeds 8%, the index will be rebalanced as of the opening of business on the next index business day by ratably reallocating the exposure of the index from stocks to the money market position in an amount sufficient to reduce such realized volatility to 8%. As of the close of business on the next index business day, the index reverts to the stock weightings as of the most recent annual index rebalancing date and the realized volatility for the 20 index business day look-back period is again calculated at such time. If realized volatility as calculated at the end of an index business day does not exceed 8%, there will be no allocation to the money market position with respect to the next index business day. The money market position reflects the returns accruing on a hypothetical cash investment in a notional money market account denominated in U.S. dollars that accrues interest at the notional interest rate, which is equal to 3-month USD LIBOR. The index may allocate its entire exposure to the money market position, the return on which will always be less than the sum of the return on 3-month USD LIBOR plus 0.75% per annum (accruing daily).

The greater the percentage of the index allocated to the money market position, the higher the return that will be required on the stocks in order to have a return on your investment. Historically, a very significant portion (up to approximately 78.6%) of the index consistently has been allocated to the money market position. If your notes are not automatically called, at maturity, for each $1,000 face amount of your notes you will receive an amount in cash equal to:

- if the index return is positive (the final level is greater than the initial level), the sum of (i) $1,000 plus (ii) the product of (a) $1,000 times (b) 2 times (c) the index return; or
- if the index return is zero or negative (the final level is equal to or less than the initial level), $1,000.

You should read the disclosure herein to better understand the terms and risks of your investment, including the credit risk of GS Finance Corp. and The Goldman Sachs Group, Inc. See page S-11.

The estimated value of your notes at the time the terms of your notes are set on the trade date is expected to be between $880 and $930 per $1,000 face amount. For a discussion of the estimated value and the price at which Goldman Sachs & Co. LLC would initially buy or sell your notes, if it makes a market in the notes, see page S-3.

Original issue date:	expected to be March 29, 2019	Original issue price:	100% of the face amount*
Underwriting discount:	% of the face amount*	Net proceeds to the issuer:	% of the face amount

* The original issue price will be % for certain investors; see "Supplemental Plan of Distribution" on page S-65.

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

Prospectus Supplement No. dated , 2019.

The issue price, underwriting discount and net proceeds listed above relate to the notes we sell initially. We may decide to sell additional notes after the date of this prospectus supplement, at issue prices and with underwriting discounts and net proceeds that differ from the amounts set forth above. The return (whether positive or negative) on your investment in notes will depend in part on the issue price you pay for such notes.

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

Estimated Value of Your Notes

The estimated value of your notes at the time the terms of your notes are set on the trade date (as determined by reference to pricing models used by Goldman Sachs & Co. LLC (GS&Co.) and taking into account our credit spreads) is expected to be between $880 and $930 per $1,000 face amount, which is less than the original issue price. The value of your notes at any time will reflect many factors and cannot be predicted; however, the price (not including GS&Co.'s customary bid and ask spreads) at which GS&Co. would initially buy or sell notes (if it makes a market, which it is not obligated to do) and the value that GS&Co. will initially use for account statements and otherwise is equal to approximately the estimated value of your notes at the time of pricing, plus an additional amount (initially equal to $ per $1,000 face amount).

Prior to , the price (not including GS&Co.'s customary bid and ask spreads) at which GS&Co. would buy or sell your notes (if it makes a market, which it is not obligated to do) will equal approximately the sum of (a) the then-current estimated value of your notes (as determined by reference to GS&Co.'s pricing models) plus (b) any remaining additional amount (the additional amount will decline to zero on a straight-line basis from the time of pricing through). On and after , the price (not including GS&Co.'s customary bid and ask spreads) at which GS&Co. would buy or sell your notes (if it makes a market) will equal approximately the then-current estimated value of your notes determined by reference to such pricing models.

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, does not set forth all the terms of your notes and therefore should be read in conjunction with such documents:

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.

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. 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. The notes will be issued under 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. The notes will be issued in book-entry form and represented by a master global note.

TERMS AND CONDITIONS

(Terms From Prospectus Supplement No. Incorporated Into Master Note No. 2)

These terms and conditions relate to prospectus supplement no. dated , 2019 of GS Finance Corp. and The Goldman Sachs Group, Inc. with respect to the issuance by GS Finance Corp. of its Autocallable Motif Capital Artificial Intelligence 8 ER Index-Linked Notes due and the guarantee thereof by The Goldman Sachs Group, Inc.

The provisions below are hereby incorporated into master note no. 2, dated August 22, 2018. References herein to "this note" shall be deemed to refer to "this security" in such master note no. 2, dated August 22, 2018. Certain defined terms may not be capitalized in these terms and conditions even if they are capitalized in master note no. 2, dated August 22, 2018. Defined terms that are not defined in these terms and conditions shall have the meanings indicated in such master note no. 2, dated August 22, 2018, unless the context otherwise requires.

CUSIP / ISIN: 40056EZM3 / US40056EZM38

Company (Issuer): GS Finance Corp.

Guarantor: The Goldman Sachs Group, Inc.

Index: Motif Capital Artificial Intelligence 8 ER Index (current Bloomberg symbol: "MCAIE Index"), or any successor index, as it may be modified, replaced or adjusted from time to time as provided herein

Face amount: $ in the aggregate on the original issue date; the aggregate face amount may be increased if the company, at its sole option, decides to sell an additional amount on a date subsequent to the trade date.

Authorized denominations: $1,000 or any integral multiple of $1,000 in excess thereof

Principal amount: Subject to redemption by the company as provided under "— Company's redemption right

(automatic call feature)" below, on the stated maturity date, the company will pay, for each $1,000 of the outstanding

face amount, an amount in cash equal to the cash settlement amount

Cash settlement amount:

- if the index return is positive, the sum of (i) $1,000 plus (ii) the product of (a) $1,000 times (b) the upside participation rate times (c) the index return; or
- if the index return is zero or negative, $1,000.

Initial index level (set on the trade date):

Final index level: the closing level of the index on the determination date, subject to adjustment as provided in "— Consequences of a non-trading day" and "— Discontinuance or modification of the index" below

Index return: the quotient of (i) the final index level minus the initial index level divided by (ii) the initial index level, expressed as a positive or negative percentage

Upside participation rate: 200%

Company’s redemption right (automatic call feature): If a redemption event occurs, then the outstanding face amount will be automatically redeemed in whole and the company will pay an amount in cash on the following call payment date for each $1,000 of the outstanding face amount equal to the sum of (i) $1,000 plus (ii) the product of $1,000 times the applicable call return specified under “Call observation dates” below.

Redemption event: a redemption event will occur if, as measured on any call observation date, the closing level of the index is greater than or equal to the applicable call level set forth below under “— Call observation dates”

Call level: with respect to any call observation date, the applicable call level specified in the table set forth under “Call observation dates” below; as shown in such table, the call level increases the longer the notes are outstanding

Call return: with respect to any call payment date, the applicable call return specified in the table set forth under “Call observation dates” below; as shown in such table, the call return increases the longer the notes are outstanding

Call payment dates (set on the trade date): the call payment dates are expected to be the tenth business day after each call observation date. If a call observation date is postponed as described under “— Call observation dates” below, such postponement of the call observation date will not postpone the related call payment date.

Call observation dates (set on the trade date): expected to be the dates specified as such in the table below, commencing March 2020 and ending March 2025, unless the note calculation agent determines that such day is not a trading day. In that event, the applicable call observation date will be the first following trading day. In no event, however, will the applicable call observation date be postponed more than five scheduled trading days. If a call observation date is postponed to the last possible day for that period, but that day is not a trading day, that day will nevertheless be the applicable call observation date.

[redacted]

March 26, 2020	102.4%	6.5%
March 26, 2021	104.8%	13%
March 28, 2022	107.2%	19.5%
March 27, 2023	109.6%	26%
March 26, 2024	112%	32.5%
March 26, 2025	114.4%	39%

Trade date: expected to be March 26, 2019

Original issue date (set on the trade date): expected to be March 29, 2019

Determination date (set on the trade date): expected to be March 26, 2026, unless the note calculation agent determines that such day is not a trading day. In that event, the determination date will be the first following trading day. In no event, however, will the determination date be postponed by more than five scheduled trading days. If the determination date is postponed to the last possible day, but such day is not a trading day, that day will nevertheless be the determination date.

Stated maturity date (set on the trade date): expected to be April 9, 2026, unless that day is not a business day, in which case the stated maturity date will be the next following business day. If the determination date is postponed as described under "— Determination date" above, such postponement of the determination date will not postpone the stated maturity date.

Closing level of the index: the official closing level of the index or any successor index published by the index sponsor (including any index calculation agent acting on the index sponsor's behalf) on any trading day for the index

Level of the index: at any time on any trading day, the official level of the index or any successor index published by the index sponsor (including any index calculation agent acting on the index sponsor's behalf) at such time on such trading day

Business day: each Monday, Tuesday, Wednesday, Thursday and Friday that is not a day on which banking institutions in New York City generally are authorized or obligated by law, regulation or executive order to close

Trading day: a day on which the index is calculated and published by the index sponsor (including any index calculation agent acting on the index sponsor's behalf). For the avoidance of doubt, if the index calculation agent determines that an index market disruption event occurs or is continuing on any day, such day will not be a trading day. A day is a scheduled trading day with respect to the index if, as of the trade date, the index is expected to be calculated and published by the index sponsor (including any index calculation agent acting on the index sponsor's behalf) on such day.

Index calculation agent: Solactive AG or any replacement index calculation agent

Index sponsor: at any time, the person or entity, including any successor sponsor, that determines and publishes the underlier as then in effect (current index sponsor: Motif Capital Management, Inc.). The notes are not sponsored, endorsed, sold or promoted by the index sponsor or any of its affiliates and the index sponsor and its affiliates make no representation regarding the advisability of investing in the notes.

Successor index: any substitute index approved by the note calculation agent as a successor index as provided under "— Discontinuance or modification of the index" below

Underlying stocks: with respect to the index, at any time, the stocks (and, if applicable, the exchange-traded fund) that comprise the index as then in effect, after giving effect to any additions, deletions or substitutions.

Consequences of a non-trading day: If a day that would otherwise be the applicable originally scheduled call observation date or the originally scheduled determination date, as applicable, is not a trading day, then such call observation date or the determination date, as applicable, will be postponed as described under "— Call observation dates" or "— Determination date" above.

If the note calculation agent determines that the closing level of the index is not available on the last possible applicable call observation date or the final index level is not available on the last possible determination date because of a non-trading day or for any other reason (other than as described under "— Discontinuance or modification of the index" below), then the note calculation agent will nevertheless determine the level of the index based on its assessment, made 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 note calculation agent determines is comparable to the index, or if the note calculation agent designates a substitute index, then the note calculation agent will determine the cash settlement amount payable on the stated maturity date or the amount payable on a call payment date, as applicable, by reference to the substitute index. We refer to any substitute index approved by the note calculation agent as a successor index.

If the note calculation agent determines that the publication of the index is discontinued and there is no successor index, the note calculation agent will determine the amount payable on the applicable call payment date or on the stated maturity date, as applicable, by a computation methodology that the note calculation agent determines will as closely as reasonably possible replicate the index.

If the note calculation agent determines that the index, the underlying stocks 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 underlying 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 underlying 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 note 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 level of the index used to determine the amount payable on a call payment date or the stated maturity date, as applicable, is equitable.

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

Note calculation agent (calculation agent): Goldman Sachs & Co. LLC ("GS&Co.")

Default amount: If an event of default occurs and the maturity of your notes is accelerated, the company will pay the default amount in respect of the principal of your notes at the maturity, instead of the amount payable on the stated maturity date as described earlier. 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 face amount 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
- 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 is described below, the holder of the notes and/or the company 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 determination 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.

Overdue principal rate: the effective Federal Funds rate

Defeasance: not applicable

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 are intended merely to illustrate the impact that the various hypothetical closing levels of the index on a call observation date and on the determination date could have on the amount of cash payable on a call payment date or on the stated maturity date, as the case may be, assuming all other variables remain constant.

The examples below are based on a range of index levels that are entirely hypothetical; no one can predict what the index level will be on any day throughout the life of your notes, and no one can predict what the closing level of the index will be on any call observation date or what the final index level will be on the determination date. The index has been highly volatile in the past — meaning that the index level has changed considerably in relatively short periods — and its performance cannot be predicted for any future period.

The information in the following examples assumes that the offered notes are purchased on the original issue date at the face amount and held to a call payment date or the stated maturity date, as the case may be. 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 the volatility of the index, the creditworthiness of GS Finance Corp., as issuer, and the creditworthiness of The Goldman Sachs Group, Inc., as guarantor. In addition, the estimated value of your notes at the time the terms of your notes are set on the trade date (as determined by reference to pricing models used by GS&Co.) is less than the original issue price of your notes. For more information on the estimated value of your notes, see “Additional Risk Factors Specific to Your Notes — The Estimated Value of Your Notes At the Time the Terms of Your Notes Are Set On the Trade Date (as Determined By Reference to Pricing Models Used By GS&Co.) Is Less Than the Original Issue Price Of Your Notes” on page S-11 of this prospectus supplement. The information in the examples also reflects the key terms and assumptions in the box below.

Key Terms and Assumptions	
Face amount	$1,000
Upside participation rate	200%
No non-trading day occurs on any originally scheduled call observation date or the originally scheduled determination date	
No change in or affecting any of the underlying stocks or the method by which the index sponsor calculates the index	
Notes purchased on original issue date and held to a call payment date or the stated maturity date	

Moreover, we have not yet set the initial index level that will serve as the baseline for determining if the notes will be automatically called and the amount that we will pay on your notes on a call payment date or at maturity. We will not do so until the trade date. As a result, the initial index level may differ substantially from the index level prior to the trade date. For these reasons, the actual performance of the index over the life of your notes, particularly on each call observation date and the determination date, as well as the amount payable on a call payment date or at maturity, may bear little relation to the hypothetical examples shown below or to the historical index performance information or hypothetical performance data shown elsewhere in this prospectus supplement. For historical index performance information and hypothetical performance data of the index during recent periods, see "The Index —Closing Levels of the Index" on page S-50. Before investing in the offered notes, you should consult publicly available information to determine the level of the index between the date of this prospectus supplement and the date of your purchase of the offered notes.

Any rate of return you may earn on an investment in the notes may be lower than that which you could earn on a comparable investment in the underlying stocks.

Also, the hypothetical examples shown below do not take into account the effects of applicable taxes. Because of the U.S. tax treatment applicable to your notes, tax liabilities could affect the after-tax rate of return on your notes to a comparatively greater extent than the after-tax return on the underlying stocks.

Hypothetical Amount In Cash Payable on a Call Payment Date

The following examples reflect hypothetical amounts that you could receive on the applicable call payment dates. While there are six potential call payment dates with respect to your notes, the examples below only illustrate the amount you will receive, if any, on the first and second call payment date.

If, for example, your notes are automatically called on the first call observation date (i.e., on the first call observation date the closing level of the index is greater than or equal to 102.4% of the initial index level), the amount in cash that we would deliver for each $1,000 face amount of your notes on the applicable call payment date would be the sum of $1,000 plus the product of the applicable call return times $1,000. Therefore, for example, if the closing level of the index on the first call observation date were determined to be 120% of the initial index level, your notes would be automatically called and the amount in cash that we would deliver on your notes on the corresponding call payment date would be 106.5% of the face amount of your notes or $1,065 for each $1,000 face amount of your notes. Even if the closing level of the index on a call observation date exceeds the applicable call level, causing the notes to be automatically called, the amount in cash payable on the call payment date will be limited due to the applicable call return.

If, for example, the notes are not automatically called on the first call observation date and are automatically called on the second call observation date (i.e., on the first call observation date the closing level of the index is less than 102.4% of the initial index level and on the second call observation date the closing level of the index is greater than or equal to 104.8% of the initial index level), the amount in cash that we would deliver for each $1,000 face amount of your notes on the applicable call payment date would be the sum of $1,000 plus the product of the applicable call return times $1,000. Therefore, for example, if the closing level of the index on the second call observation date were determined to be 140% of the initial index level, your notes would be automatically called and the amount in cash that we would deliver on your notes on the corresponding call payment date would be 113% of the face amount of your notes or $1,130 for each $1,000 face amount of your notes. Even if the closing level of the index on a call observation date exceeds the applicable call level, causing the notes to be automatically called, the amount in cash payable on the call payment date will be limited due to the applicable call return.

Hypothetical Cash Settlement Amount at Maturity

If the notes are not automatically called on any call observation date (i.e., on each call observation date the closing level of the index is less than the applicable call level), the cash settlement amount we would deliver for each $1,000 face amount of your notes on the stated maturity date will depend on the performance of the index on the determination date, as shown in the table below. The table below shows the hypothetical cash settlement amounts that we would deliver on the stated maturity date in exchange for each $1,000 face amount of the notes if the final index level (expressed as a percentage of the initial index level) were any of the hypothetical levels shown in the left column.

The levels in the left column of the table below represent hypothetical final index levels and are expressed as percentages of the initial index level. The amounts in the right column represent the hypothetical cash settlement amounts, based on the corresponding hypothetical final index level (expressed as a percentage of the initial index level), and are expressed as percentages of the face amount of a note (rounded to the nearest one-hundredth of a percent). Thus, a hypothetical cash settlement amount of 100.00% means that the value of the cash payment that we would deliver for each $1,000 of the outstanding face amount of the offered notes on the stated maturity date would equal 100.00% of the face amount of a note, based on the corresponding hypothetical final index level (expressed as a percentage of the initial index level) and the assumptions noted above.

The Notes Have Not Been Automatically Called	
Hypothetical Final Index Level (as Percentage of Initial Index Level)	Hypothetical Cash Settlement Amount (as Percentage of Face Amount)
175.00%	250.00%
150.00%	200.00%
140.00%	180.00%
130.00%	160.00%
110.00%	120.00%
100.00%	100.00%
90.00%	100.00%
75.00%	100.00%
50.00%	100.00%
25.00%	100.00%
0.00%	100.00%

If, for example, the notes have not been automatically called on a call observation date and the final index level were determined to be 25.00% of the initial index level, the cash settlement amount that we would deliver on your notes at maturity would be 100.00% of the face amount of your notes, as shown in the table above. As a result, if you purchased your notes on the original issue date and held them to the stated maturity date, you would receive no return on your investment.

The following chart also shows a graphical illustration of the hypothetical cash settlement amounts (expressed as a percentage of the face amount of your notes) that we would pay on your notes on the stated maturity date, if the final index level (expressed as a percentage of the initial index level) were any of the hypothetical levels shown on the horizontal axis. The chart shows that any hypothetical final index level (expressed as a percentage of the initial index level) of less than 100.00% (the section left of the 100.00% marker on the horizontal axis) would result in a hypothetical cash settlement amount of 100.00% of the face amount of your notes.

The amounts shown above are entirely hypothetical; they are based on closing levels of the index that may not be achieved on a call observation date or the determination date, as the case may be, and on assumptions that may prove to be erroneous. The actual market value of your notes on a call payment date, 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 amounts 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 amounts on notes held to a call payment date or the stated maturity date, as the case may be, in the examples above assume you purchased your notes at their face amount and have not been adjusted to reflect the actual issue price you pay for your notes. The return on your investment (whether positive or negative) in your notes will be affected by the amount you pay for your notes. 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-25.

Payments on the notes are economically equivalent to the amounts that would be paid on a combination of other instruments. For example, payments on the notes are economically equivalent to a combination of a zero coupon bond bought by the holder and one or more options entered into between the holder and us (with one or more implicit option premiums paid over time). The discussion in this paragraph does not modify or affect the terms of the notes or the U.S. federal income tax treatment of the notes, as described elsewhere in this prospectus supplement.

We cannot predict the actual closing levels of the index on each of the call observation dates or final index level on the determination date or what the market value of your notes will be on any particular trading day, 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 in cash that you will receive and the rate of return on the offered notes will depend on whether or not the notes are automatically called, the actual initial index level, which we will set on the trade date, and the actual closing level of the index on each call observation date and the actual final index level on the determination date, each as determined by the note calculation agent as described above. Moreover, the assumptions on which the hypothetical examples are based may turn out to be inaccurate. Consequently, the amount in cash to be paid in respect of your notes on a call payment date or the stated maturity date, as the case may be, may be very different from the information reflected in the examples above.

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 any underlying stocks, i.e., the stocks comprising the index to which your notes are linked. You should carefully consider whether the offered notes are suited to your particular circumstances.

The Estimated Value of Your Notes At the Time the Terms of Your Notes Are Set On the Trade Date (as Determined By Reference to Pricing Models Used By GS&Co.) Is Less Than the Original Issue Price Of Your Notes

The original issue price for your notes exceeds the estimated value of your notes as of the time the terms of your notes are set on the trade date, as determined by reference to GS&Co.'s pricing models and taking into account our credit spreads. Such estimated value on the trade date is set forth above under "Estimated Value of Your Notes"; after the trade date, the estimated value as determined by reference to these models will be affected by changes in market conditions, the creditworthiness of GS Finance Corp., as issuer, the creditworthiness of The Goldman Sachs Group, Inc., as guarantor, and other relevant factors. The price at which GS&Co. would initially buy or sell your notes (if GS&Co. makes a market, which it is not obligated to do), and the value that GS&Co. will initially use for account statements and otherwise, also exceeds the estimated value of your notes as determined by reference to these models. As agreed by GS&Co. and the distribution participants, this excess (i.e., the additional amount described under "Estimated Value of Your Notes") will decline to zero on a straight line basis over the period from the date hereof through the applicable date set forth above under "Estimated Value of Your Notes". Thereafter, if GS&Co. buys or sells your notes it will do so at prices that reflect the estimated value determined by reference to such pricing models at that time. The price at which GS&Co. will buy or sell your notes at any time also will reflect its then current bid and ask spread for similar sized trades of structured notes.

In estimating the value of your notes as of the time the terms of your notes are set on the trade date, as disclosed above under "Estimated Value of Your Notes", GS&Co.'s pricing models consider certain variables, including principally our credit spreads, interest rates (forecasted, current and historical rates), volatility, price-sensitivity analysis and the time to maturity of the notes. These pricing models are proprietary and rely in part on certain assumptions about future events, which may prove to be incorrect. As a result, the actual value you would receive if you sold your notes in the secondary market, if any, to others may differ, perhaps materially, from the estimated value of your notes determined by reference to our models due to, among other things, any differences in pricing models or assumptions used by others. See "— The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors" below.

The difference between the estimated value of your notes as of the time the terms of your notes are set on the trade date and the original issue price is a result of certain factors, including principally the underwriting discount and commissions, the expenses incurred in creating, documenting and marketing the notes, and an estimate of the difference between the amounts we pay to GS&Co. and the amounts GS&Co. pays to us in connection with your notes. We pay to GS&Co. amounts based on what we would pay to holders of a non-structured note with a similar maturity. In return for such payment, GS&Co. pays to us the amounts we owe under your notes.

In addition to the factors discussed above, the value and quoted price of your notes at any time will reflect many factors and cannot be predicted. If GS&Co. makes a market in the notes, the price quoted by GS&Co. would reflect any changes in market conditions and other relevant factors, including any deterioration in our creditworthiness or perceived creditworthiness or the creditworthiness or perceived creditworthiness of The Goldman Sachs Group, Inc. These changes may adversely affect the value of your notes, including the price you may receive for your notes in any market making transaction. To the extent that GS&Co. makes a market in the notes, the quoted price will reflect the estimated value determined by reference to GS&Co.'s pricing models at that time, plus or minus its then current bid and ask spread for similar sized trades of structured notes (and subject to the declining excess amount described above).

Furthermore, 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" below.

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.

You May Receive Only the Face Amount of Your Notes at Maturity

If the index return is zero or negative on the determination date, the return on your notes will be limited to the face amount.

Even if the amount paid on your notes at maturity 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 note with the same stated maturity that bears interest at the prevailing market rate.

Your Notes Do Not Bear Interest

You will not receive any interest payments on your notes. As a result, even if the cash settlement amount payable for your notes on 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.

The Amount In Cash That You Will Receive on a Call Payment Date or on the Stated Maturity Date is Not Linked to the Closing Level of the Index at Any Time Other Than on the Applicable Call Observation Date or the Determination Date, as the Case May Be

The amount in cash that you will receive on a call payment date, if any, will be paid only if the closing level of the index on the applicable call observation date is greater than or equal to the applicable call level. Therefore, the closing level of the index on dates other than the call observation dates will have no effect on any amount paid in respect of your notes on the call payment date. In addition, the cash settlement amount you will receive on the stated maturity date (if the notes were not previously automatically called) will be based on the closing level of the index on the determination date and, therefore, the closing level of the index on dates other than the determination date will have no effect on any cash settlement amount paid in respect of your notes on the stated maturity date. Therefore, for example, if the closing level of the index dropped precipitously on the determination date, the cash settlement amount for the notes may be significantly less than it otherwise would have been had the cash settlement amount been linked to the closing level of the index prior to such drop. Although the actual closing level of the index on the applicable call payment dates, the stated maturity date or at other times during the life of the notes may be higher than the closing level of the index on the call observation dates or the final index level on the determination date, you will not benefit from the closing level of the index at any time other than on the call observation dates or on the determination date.

The Amount You Will Receive on a Call Payment Date Will Be Limited

Regardless of the closing level of the index on each of the call observation dates, the amount in cash that you may receive on a call payment date is limited. Even if the closing level of the index on a call observation date exceeds the applicable call level, causing the notes to be automatically called, the amount in cash payable on the call payment date will be limited due to the applicable call return. If your notes are automatically called on a call observation date, the maximum payment you will receive for each $1,000 face amount of your notes will depend on the applicable call return.

Your Notes Are Subject to Automatic Redemption

We will automatically call and redeem all, but not part, of your notes on a call payment date, if, as measured on any call observation date, the closing level of the index is greater than or equal to the applicable call level. Therefore, the term for your notes may be reduced and you will not receive any further payments on the notes since your notes will no longer be outstanding. You may not be able to reinvest the proceeds from an investment in the notes at a comparable return for a similar level of risk in the event the notes are called prior to maturity.

The Index Measures the Performance of the Total Return Index Less the Sum of the Return on the Notional Interest Rate Plus 0.75% Per Annum (Accruing Daily)

Your notes are linked to the index. The index measures the performance of the total return index, which includes the underlying stocks and the money market position, less the sum of the return on the notional interest rate plus 0.75% per annum (accruing daily). Increases in the level of the notional interest rate may offset in whole or in part increases in the levels of the underlying stocks. As a result, any return on the index — and thus on your notes — may be reduced or eliminated, which will have the effect of reducing the amount payable in respect of your notes. The total return index must produce positive returns at least as great as the sum of the return on the notional interest rate plus 0.75% per annum (accruing daily) before the index will have a positive return. If the index fails to outperform 3-month USD LIBOR plus 0.75% per annum (accruing daily) you will receive no return on your investment.

The index, through the total return index, may allocate its entire exposure to the money market position, the return on which will always be less than the sum of the return on 3-month USD LIBOR plus 0.75% per annum (accruing daily). The greater the percentage of the index allocated to the money market position, the higher the return that will be required on the underlying stocks in order to have a return on your investment. Historically, a very significant portion (up to approximately 78.6%) of the index exposure consistently has been to the money market position.

The Underlying Stocks are All in the Technology Sector, and the Index Attempts to Provide Exposure to Companies Developing Artificial Intelligence Services and Companies Using Artificial Intelligence Technology

The index is comprised of U.S. and non-U.S. equity securities listed on U.S. exchanges (either directly or through American Depositary Receipts (ADRs)) of companies classified in the technology sector under the Thomson Reuters Business Classification system (the “technology sector”) and attempts to include stocks and ADRs of companies that develop and/or use artificial intelligence technology, and that may benefit from the further development of artificial intelligence. A “U.S. exchange” for purposes of the index is the NYSE, NYSE Arca, NYSE American (formerly NYSE MKT), NASDAQ Global Select Market, NASDAQ Select Market, NASDAQ Capital Market or IEX. For purposes of the index, “artificial intelligence” is the ability of a machine to perform cognitive tasks typically associated with human brains, such as perception, reasoning, learning, interacting with the environment and problem solving. Because these companies are all in the technology sector, the index is more likely to be adversely affected by the negative performance of such sector than an index that has more diversified holdings across a larger number of sectors. In addition, the exposure of the index at any time could be limited to the money market position.

Although your investment in the notes will not result in the ownership or other direct interest in the stocks and ADRs that comprise the index (the “underlying stocks”), the return on your investment in the notes will be subject to certain risks and other factors similar to those associated with direct investments in stocks and ADRs of companies in the technology sector and also will be subject to reduction by the sum of the return on the notional interest rate plus 0.75% per annum (accruing daily). In addition, your exposure to stocks and ADRs of companies in the technology sector will be reduced to the extent that the index is invested in the money market position. Factors affecting companies in the technology sector include, for example, rapid changes in technology product cycles, rapid product obsolescence, government regulation, funding and spending and competition, both domestically and internationally, including competition from foreign competitors with lower production costs. Legal and regulatory changes, particularly related to information privacy and data protection, may have an impact on technology companies’ products or services. In addition, these companies typically engage in significant amounts of spending on research and development and there is no guarantee that the products or services produced by these companies will be successful. Stocks of technology companies and companies that rely heavily on technology, especially those of smaller, less-seasoned companies, tend to be more volatile than companies that do not rely heavily on technology. Technology companies are also heavily dependent on patent and intellectual property rights, the loss or impairment of which may adversely affect profitability. Additionally, companies in the technology sector may face dramatic and often unpredictable changes in growth rates and competition for the services of qualified personnel.

In addition to the business risks outlined above, risks relating to artificial intelligence in particular include concerns regarding the displacement of human labor, security threats and regulations focused on data privacy and strategy implementation issues.

The Index May Not Successfully Capture Exposure to Companies That May Benefit From the Development of Artificial Intelligence

The index attempts to track the common equity of U.S. and non-U.S. companies listed on U.S. exchanges that either develop or use artificial intelligence technology, subject to a limitation on volatility. The index rebalances annually and the underlying stocks included in the index and their weights are determined based solely on the use of an established word search algorithm utilizing terms from the Association for Computing Machinery (ACM) Computing Classification 2012 taxonomy (with such weights also adjusted for market capitalization). Such word search algorithm calculates the number of times specified search phrases appear in such a company's annual regulatory filing, as well as the length of such filing (in each case, excluding exhibits, information incorporated by reference and any amendments to such filing), and compares these metrics to those of each other annual regulatory filing in the search corpus. The search corpus consists of all annual regulatory filings — across all sectors — filed with the SEC within the 15 months prior to the applicable annual rebalancing (in each case, excluding exhibits, information incorporated by reference and amendments). However, there is no guarantee that the methodology the index sponsor has implemented — which is heavily dependent on whether companies in the technology sector use certain search phrases in their annual regulatory filings — will capture (i) all such companies that are developing artificial intelligence technology, (ii) all such companies that are using artificial intelligence technology in their business or (iii) the relevance of artificial intelligence to any such company's business. The index will not include any companies outside of the technology sector, regardless of how they describe their business and therefore may exclude companies that are very significantly involved in the development or use of artificial intelligence technology.

Also, the volatility control may limit the index's ability to track the performance of such companies, particularly as the stocks in the index could, given the new technologies involved, be potentially more likely to be subject to price volatility. The index may fail to realize gains that could occur as a result of reducing the exposure of the total return index to stocks that have experienced price volatility. As a result, the level of the index, which is rebalanced into the money market position based on prior volatility trends, may decline. If the index declines you will have a zero return on your investment; however, you will receive at least the face amount of your notes on the stated maturity date, subject to our credit risk. No assurance can be given that the investment methodology used to construct the index will outperform any alternative index or basket of stocks that might be constructed from the underlying stocks or that otherwise attempts to invest in companies involved in the development or use of artificial intelligence technology solutions, particularly if such index or basket includes stocks outside of the technology sector. The index is different from an investment that seeks long-term exposure to a constant set of underlying stocks because of the annual rebalancing feature and the volatility control limit.

In addition, pursuant to its methodology and among other rules, the index performs relevant phrase searches of companies' annual regulatory filings to exclude companies that have few or no relevant search phrases related to artificial intelligence. Thus, companies that develop or use artificial intelligence technology will be excluded from the index if such companies' annual regulatory filings do not contain a significant number of specified search phrase matches. A lack of matches in a company's annual regulatory filing results in a low thematic exposure score (a measure of relevance to the artificial intelligence theme, as discussed under "The Index" below), even if the products or services provided by such company are significantly connected to the development or use of artificial intelligence. A lack of matches could be due to, among other things, a company's use of alternative terminology when describing its development or use of artificial intelligence or its use of mainly "common" phrases that occur in more than 4% of all annual regulatory filings in the search corpus (as such "common" phrases are consequently removed from the search phrase list pursuant to the index methodology). Furthermore, as a result of the index methodology, companies that use artificial intelligence technology solutions to solve business problems and would benefit from the development of artificial intelligence may not be included in the index for other reasons. In particular, the index will exclude:

- companies in sectors outside of the technology sector, such as financial companies, telecommunications services companies, healthcare companies and utilities companies, which may rely heavily on artificial intelligence in their businesses;
- private companies, which may include joint ventures between two or more public companies;
- non-U.S. and U.S. companies that are not listed on a U.S. exchange, regardless of whether their common equity is listed on a non-U.S. exchange; and
- other companies not meeting the selection criteria or eligibility screens set forth in the index methodology.

Further, index market disruption events, particularly during the implementation of annual base index rebalancing, may cause the underlying stocks to be overweighted or underweighted relative to what their weight otherwise would have been and this overweighting or underweighting of underlying stocks will determine an underlying stock's weight in the index until the next annual base index rebalancing. This may further limit the extent to which the index captures exposure to certain companies developing and/or using artificial intelligence technology solutions and also may have an adverse impact on the level of the index. See " Index Market Disruption Events Could Affect the Level of the Index on Any Date" and "The Index Index Market Disruptions" below.

In addition, while the index attempts to track U.S. exchange-listed stocks of companies in the technology sector that develop and/or use artificial intelligence technology solutions that may benefit from the development of artificial intelligence, any such effect may not occur during the term of the notes. Therefore, even if the products and services provided by such companies and the companies themselves do ultimately benefit from the development of artificial intelligence, this benefit may not be realized fully, or at all, during the term of the notes.

The Index Excludes Companies that Develop or Use Artificial Intelligence But Are Not in the Technology Sector

In order for a company to be eligible for inclusion in the index, such company must be classified in the technology sector under the Thomson Reuters Business Classification system. A company that develops or uses artificial intelligence technology solutions, but that is classified under any sector other than the technology sector, will not be included in the index, even if that company includes specified search phrases in its annual regulatory filing with the SEC, even if such company's development or use of artificial intelligence is significant and/or revenue-producing and even though that company's annual regulatory filings were included in the search corpus. For example, Tesla, Inc., a company that designs, develops, manufactures and sells electric vehicles, energy generation and energy storage systems, states in its 2017 10-K that it is integrating machine learning technology in the software underlying its self-driving cars, and has introduced object detection capability in its vehicles. However, Tesla, Inc. is not included in the index because it is not formally classified in the technology sector. As a further example, TiVo Corporation, a media and entertainment products company that provides cloud-based services, embedded software solutions and other intellectual property relating to online content, states in its 2017 10-K that its technology platform uses machine learning techniques. While its platform uses machine learning technology, TiVo Corporation is not included in the index because it is not formally classified in the technology sector. Although companies may develop or use artificial intelligence technology in their business, and such companies could benefit from the further development of artificial intelligence, you may not have exposure to such companies in the index due to the technology sector screen. See "The Index — List of Index Constituents as of January 31, 2019" below for a full list of index constituents as of January 31, 2019.

The Index May Not Include, or May Not Heavily Weight, Companies in the Technology Sector That Could Benefit from the Development of Artificial Intelligence

In order for a company to be eligible for inclusion in the index, it must include, in its most recent annual regulatory filing with the SEC within the 15 months prior to the annual rebalancing, at least one of the specific search phrases determined by the index sponsor that are associated with artificial intelligence and machine learning as identified in the most recent ACM Computing Classification taxonomy (ACM taxonomy). A company that develops or uses artificial intelligence technology solutions but that contains no key search phrases due to the use of alternative terminology in its annual regulatory filing or other reasons (including the insignificance of such business relative to the company's other businesses) will not be included in the index, even if such company's development or use of artificial intelligence is or may be significant. In addition, even if a company is classified in the technology sector and its annual regulatory filing contains one or more search phrases, it will not be included in the index if it does not meet minimum market capitalization, price, average daily dollar volume and historical price availability thresholds. See "The Index   Base Index Composition   Apply underlying stock screens" below for a description of the stock screens. Further, even if a company's annual regulatory filing contains one or more search phrases and such company is ultimately included in the index, such company's weighting in the index may not be reflective of its relevance to the development or use of artificial intelligence since index weightings are determined based on scores attributed to each annual regulatory filing that take into account search phrase frequency within the document (relative to its frequency in other documents comprising the full search corpus) as well as such document's length (relative to the average document length within the search corpus).

The Index Will Include, and May Heavily Weight, Companies That Provide Products and Services Not Related to Artificial Intelligence

A company's weight in the index is based, in part, on its exposure to the artificial intelligence theme. The index constituents are selected using, in part, a keyword search of companies' annual regulatory filings using specified search phrases. The relevant search phrases were selected with the intent of identifying companies that develop artificial intelligence technology solutions and sell those solutions as products or services or deploy artificial intelligence solutions to solve business problems. However, a company that develops and/or uses artificial intelligence technology but does not include at least one of the specified search phrases in its most recent annual regulatory filing (filed with the SEC within the 15 months preceding the annual index rebalancing) is not included in the index. Further, the index includes, and may heavily weight, companies that derive significant revenue from non-artificial intelligence related products and services. A company is included in the index so long as it includes at least one specified search phrase in its applicable annual regulatory filing and meets the other threshold criteria (e.g., sector, stock and low theme relevance screens), even if the company does not use artificial intelligence solutions to solve business problems or derives the majority of its revenue from products and services unrelated to artificial intelligence. The inclusion of companies that derive the majority of their revenue from non-artificial intelligence related products and services could cause the level of the index to decrease even if such companies' revenue from artificial intelligence-related products or services increases or the performance of the technology sector generally increases. With respect to any such company, this could be due to slower growth, or even a decline, in earnings from businesses that do not relate to artificial intelligence offsetting the impact on the stock price of any increase in earnings from businesses that relate to artificial intelligence.

Moreover, even if a company develops and/or uses products and services related to artificial intelligence and includes a robust discussion of artificial intelligence (including a large number of search phrase hits) in its most recent annual regulatory filing, there is no guarantee that such artificial intelligence business will develop or contribute to earnings over time, therefore influencing the stock of such company. There is no direct correlation between any single metric of a company's performance and the price of its stock. Even if a company in the index is focused solely on artificial intelligence, the price of its stock will be affected by many factors related to markets, the relative performance of competitors and the anticipated performance of the company, in addition to the actual earnings of such company.

As discussed above, the appearance of at least one specified search phrase in a company's annual regulatory filing is required for a company to be considered for inclusion in the index. However, the appearance of one or more search phrases in a company's annual regulatory filing may have no connection to the revenue or earnings, if any, that the company derives from the development or use of artificial intelligence technology or to the future performance of such company's stock. A company included in the index may have little or no revenue or earnings derived from artificial intelligence technology, and any artificial technology it develops may not produce revenue or earnings in the future. As a result, certain companies included in the index may not benefit from the development of artificial intelligence to any meaningful degree or at all.

A Company's Weighting in the Index is Based on the Occurrence of Relevant Search Phrases in the Company's Annual Regulatory Filing, Measured Using the BM25 Algorithm (an Established Word Search Algorithm), and Not Based on Revenue or Earnings Derived from Artificial Intelligence Related Products and Services

A company's weight in the index is based, in part, on the number of specified search phrase hits in its annual regulatory filing, which is used to assign a score to such document. Such document score is calculated based on the occurrence of the specified search phrases in the document, using an established word search algorithm that takes into account the frequency with which each search phrase is used in the document, the document length (relative to the average document length across all documents in the search corpus) and the rareness of the search phrase (measured by the frequency with which the search phrase appears across all documents in the search corpus) (the BM25 algorithm). The BM25 algorithm (in which the "BM" refers to "best match") is a method that can be used in probabilistic information retrieval and is based on the idea that assigning a score to reflect how relevant something is to a particular search query ought to reflect the probability that a person will consider the result relevant. The index does not weight companies based on revenue or earnings derived from artificial intelligence related products and services, but determines weights based, in part, on the frequency and variety of search phrases that occur in a company's most recent annual regulatory filing. As a result, a company's weight in the index is essentially based on the number of times specified search phrases are used in such company's annual regulatory filing, taking into account the length of the document and the rareness of such phrases relative to other documents.

The index sponsor utilizes the BM25 algorithm to attempt to identify companies that are relevant to the artificial intelligence theme based on whether and the extent to which a company uses one or more of the identified search phrases in its annual regulatory filing. By incorporating a concept of probability of relevance, the BM25 algorithm attempts to estimate how likely it is that a document is relevant to the artificial intelligence theme based on calculations that take into account the frequency with which a search phrase (or phrases) is used in the document, the document length (relative to the average document length across all documents in the search corpus) and the rareness of the search phrase(s) (measured by the frequency with which the search phrase(s) appears across all documents in the search corpus). The BM25 algorithm generally (i) gives more importance to documents which contain a higher number of search matches, (ii) gives more importance to search matches in shorter documents than longer documents (based on the idea that the search phrases are more "concentrated" in a shorter document and therefore more likely to be relevant), (iii) gives less importance to documents that contain phrases that are commonly used across the search corpus (based on the idea that common words are less important to the calculation of relevance) and (iv) gives less importance to the repetition of a single search phrase throughout a document as compared to matches of several different search phrases in a document.

Balancing these competing objectives through the BM25 algorithm means that a high number of search hits alone does not necessarily translate into a high BM25 score or a high level of relevance for a document. This measurement may not provide an accurate representation of a company's relevance to the artificial intelligence theme and there may not be a strong correlation between the frequency of the specified search phrases in an annual regulatory filing and a company's document score, theme exposure or resulting index weight. Further, this measurement may be less successful at identifying relevance to the artificial intelligence theme than an index which determines constituent weightings based on identified revenue derived from products and services related to such theme. For example, a large market capitalization company with broad or diversified revenue streams may significantly rely on artificial intelligence technology in its business, but discuss it very little in its annual regulatory filing or discuss it using alternate terminology (and not the specified search phrases).

In addition, the BM25 score for a document may also be affected by other features of the index methodology. For example, when the search phrase list is created using the ACM taxonomy and any overlap exists between phrases (but they are not identical), both phrases are included in the search phrase list, which may ultimately lead to a higher BM25 score for an annual regulatory filing containing such overlapping phrases. The index sponsor then tokenizes, filters and stems the search phrase list and all annual regulatory filings by, among other things, separating such phrase list and filings into words and removing all symbols, punctuation, possessive endings and common inflexional endings. See " The Search Phrases and Annual Regulatory Filings Are Tokenized, Filtered and Stemmed Before the Index Sponsor Performs Searches of Such Annual Regulatory Filings" below. For instance, if a company's annual regulatory filing mentions the stemmed search phrase "machin learn algorithm" twice, such mentions will count as four matches — two matches for each of the stemmed search phrases "machin learn algorithm" and "machin learn" — because the latter phrase is included in the former. As a result, the BM25 score for such document will be calculated as the sum of its score for "machin learn algorithm" plus its score for "machin learn", rather than taking into account only the matches for one of those search phrases. If a company's annual regulatory filing contains overlapping search phrases, such document could receive an inflated score, resulting in a higher weight for such company in the index, as compared to companies with annual regulatory filings containing no overlapping search phrases.

Further, while the BM25 algorithm is the method chosen by the index sponsor to measure relevance to the artificial intelligence theme, the BM25 algorithm may not be successful in measuring a company's relevance to such theme. In addition, there may be alternate algorithms or index or basket methodologies that would be more accurate in capturing companies that would benefit from the development of artificial intelligence than the BM25 algorithm and methodology used in this index. Furthermore, investment research analysts utilizing available data, as well as their knowledge of companies, industries and equity investors and markets, may be able to create investment baskets or stock recommendations that embody the artificial intelligence theme and which outperform the index, particularly if such baskets or recommendations do not include any type of volatility control limit.

The Rareness of a Search Phrase Will Affect the Calculation of a Company's Annual Regulatory Filing Score and Such Company's Weight in the Index

A company's weight in the index is based, in part, on a document score assigned to its most recent annual regulatory filing, which is intended to measure such company's relevance to the artificial intelligence theme. As discussed above, in addition to search phrase frequency within a document and such document's length, a document score takes into account the rareness of the search phrase, measured by the frequency with which the search phrase appears across all documents in the search corpus. The index methodology gives less importance (and consequently, lower document scores) to documents that contain more common search phrases by "penalizing" documents with search phrases that are used in 5% or more of the documents in the search corpus. Such methodology assumes that common words are less important to the calculation of relevance and that matches for rarer search phrases are an indication of more specific descriptions that are more relevant to the artificial intelligence theme. For example, if Company A's annual regulatory filing mentions "artifici intellig" (the stemmed version of "artificial intelligence") several times, and Company B's annual regulatory filing mentions "robot plan" (the stemmed version of "robotic planning") several times, but "artifici intellig" is a very common match across the majority of documents in the search corpus while "robot plan" is only used in one or two other documents in the search corpus, Company B's annual regulatory filing may receive a higher document score and Company B a higher weight in the index, even if Company A's annual regulatory filing had a higher number of search phrase matches overall. A high number of search hits alone does not necessarily translate into a high document score and the uniqueness of a search phrase, measured relative to its use across all documents in the search corpus, could have a significant impact on a company's weight in the index.

The ACM Taxonomy Used to Determine the Relevant Search Phrases and Base Index Universe Is Not Expected to Be From the Same Time Period as the Annual Regulatory Filing Used to Determine a Company's Weight in the Index

The index sponsor reviews all annual regulatory filings filed with the SEC by a company within the 15 months prior to an annual index rebalancing in order to determine such company's index eligibility and weight in the index. All phrases listed under the “Artificial Intelligence” and “Machine Learning” categories in the ACM taxonomy are used to conduct a keyword search, assign document scores and determine index weights.

The ACM taxonomy used for purposes of determining the applicable search phrases generally has not been, and it (or any successor) is not expected to be, from the same period as the revenue period covered by a company’s annual regulatory filing. For example, for the June 2018 base index rebalancing day, the ACM taxonomy used by the index sponsor was published in 2012, whereas, generally, the company annual regulatory filings were for the 2017 fiscal year. Further, if a new ACM taxonomy were to be released 14 or fewer index business days before an annual base index rebalancing day, such taxonomy would not be used for purposes of the search phrase list for such base index rebalancing

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day and instead would be expected to be used on the next following annual base index rebalancing day (i.e., more than a year later). Similarly, if a new ACM taxonomy is released shortly after an annual base index rebalancing day, such taxonomy would be expected to be used to create the applicable search phrase list on the next following annual base index rebalancing day (i.e., almost a year later).

While the ACM taxonomy may be updated from time to time, it has historically been updated very infrequently and may not reflect current or recent developments in the artificial intelligence and machine learning areas. Further, in the event that the ACM taxonomy is no longer published (including by any successor to ACM) or becomes unavailable, the index committee will continue to use the most recent list of search phrases created based upon the last available ACM taxonomy. Artificial intelligence is a relatively new and developing technology. Historically, new technologies have adopted new “technical jargon” at a much higher rate than older technologies or more mature businesses. This trend, if it continues, could increase the impact of the less frequent adoption of a new ACM taxonomy.

As a result, the ACM taxonomy referenced for purposes of determining the base index and constituent weightings may include outdated or irrelevant terms/phraseology, which may lead to less success in identifying companies developing and/or using artificial intelligence technology. In the case that a new ACM taxonomy or successor thereto is released, the index committee will update the applicable search phrase list and such updated phrases will be included in the determination of the base index at the next index rebalancing. However, even if the ACM taxonomy is updated, it is likely that the taxonomy referenced will always be from a different time period than the regulatory filings of the companies being analyzed for index inclusion and weighting.

The Search Phrases and Annual Regulatory Filings Are Tokenized, Filtered and Stemmed Before the Index Sponsor Performs Searches of Such Annual Regulatory Filings

After obtaining a list of search phrases using the “Artificial Intelligence” and “Machine Learning” categories of the ACM taxonomy, the index sponsor uses a tokenizing, filtering and stemming process to separate the search phrase list and all annual regulatory filings into words (“tokens”) and removes all symbols and punctuation before searching for phrase matches. In addition, as part of this tokenization, filtering and stemming process, the index sponsor removes possessive endings, converts such tokens to lowercase, removes all English “stop words” (specifically, “a”, “an”, “and”, “are”, “as”, “at”, “be”, “but”, “by”, “for”, “if”, “in”, “into”, “is”, “it”, “no”, “not”, “of”, “on”, “or”, “such”, “that”, “the”, “their”, “the “will" and “with”) and stems such tokens by removing common inflexional endings. For example, the search phrase “artificial intelligence” would become “artifici intellig” in its stemmed form and the search phrase “activity recognition and understanding” would become “activ recognit understand” in its stemmed form. Using tokenized and stemmed versions of the search phrases when searching for matches in a company’s annual regulatory filing increases the possibility that even if a specified search phrase occurs in such filing, it may be used in a way that is unrelated to the development or use of artificial intelligence. The appearance of a specified search phrase in a company’s annual regulatory filing does not necessarily mean such phrase is being used in the context of artificial intelligence technology or, if it is, in the context of the development or use of artificial intelligence by the company.

In connection with the tokenizing, filtering and stemming process, any formatting in an annual regulatory filing (e.g., bulleting, table formatting or line breaks) is removed. Further, when a “stop word” is removed from a search phrase or annual regulatory filing, the relative positioning of the “stop word” within such phrase or document is maintained for purposes of the search and such search includes matches that have a word in place of the “stop word” that was previously removed. For example, the tokenized and stemmed version of the “planning and scheduling” search phrase is “plan ? schedul” rather than simply “plan schedul", in which the “?” represents any single word between any form of “plan” and “schedul”. Thus, any phrase in an annual regulatory filing that begins with a form of “plan” and ends with a form of “schedul” and (i) has one word between, regardless of what that word is, or (ii) formerly contained a “stop word” between, regardless of what that “stop word” was, will be included in the search hit results. As a result of the above steps, a search hit may occur for a phrase that does not actually match the original search phrase or is not used in the context of artificial technology as the original phrase (prior to tokenizing, filtering and stemming, including the removal of “stop words”) intended, and a search phrase match may not occur at all for a phrase that appears in an annual regulatory filing and that would otherwise have matched if not for the removal of formatting in such document.

In addition, the specified search phrases range from a single word to several words in length. A document score for a company's annual regulatory filing is calculated by taking into account both search phrase frequency (relative to its frequency in other documents comprising the search corpus) and document length (relative to the average document length within the search corpus). Due to the formula used to determine a frequency score for a search term, the occurrence of a search phrase in an annual filing counts as a single match, regardless of how many words that particular search phrase may contain. In addition, the use of longer search phrases may contribute to longer document length. Shorter documents contain fewer total terms, which means that a larger number of search phrase matches in a shorter document increases the probability that such matches are relevant (which leads to a higher document score). In general, the more words in common with the search phrases a document has, the higher such document's score will be. However, assuming all other variables remain the same, a document score would decrease if the document length increases. Therefore, if a company has search phrase matches in its annual regulatory filing but such search phrases are comprised of several words each, it may have a magnified negative effect on the comparison to document length and could lead to a lower document score than a company whose search phrase matches each consist of a single word.

The Index Sponsor Reviews All Annual Regulatory Filings Filed with the SEC Within the Prior 15 Months When Determining a Company's Weight in the Index; the Index Sponsor's Review Does Not Include Exhibits, Amendments or Information Incorporated by Reference in the Annual Regulatory Filing and the Index Sponsor Does Not Screen for Context Except for a Limited Company Relevance Screen

The index sponsor reviews all annual regulatory filings filed with the SEC by a company within the 15 months prior to an annual index rebalancing in order to determine such company's index eligibility and weight in the index. Although only the score assigned to the most recent annual regulatory filing of a company is used for purposes of weighting such company in the index, the 15 month inclusion period will lead to many companies having more than one annual regulatory filing considered in the full search corpus, which will impact certain aspects of the document scoring and stock weighting process, such as the determination of the average document length in the search corpus to which each individual document is compared.

In addition, while the index sponsor considers the annual regulatory filing (excluding exhibits to such filing, any information incorporated by reference in such filing and any amendments to such filing) when determining a document score, it does not screen for context except in the case of a limited company relevance screen described below. For example, a company's annual regulatory filing may contain specified search phrases in its business or risk factor sections because the company is comparing itself to competitors or describing what others in its industry are doing, even if the context of the discussion is that the company lags behind its competitors in its use or development of artificial intelligence, that the company's customers want artificial intelligence solutions that the company cannot provide, that the company may not have the research and development resources necessary to compete in the artificial intelligence space or even that the company is against the use of artificial intelligence in aspects of its business because of security concerns, labor relations concerns or otherwise. This could result in a higher document score and index weight that do not accurately represent any such company's relevance to the artificial intelligence theme.

Pursuant to the methodology, if, after identifying search phrase matches for all documents in the corpus and applying several other screens, the index sponsor reasonably believes that all of the search phrase matches included in a company's annual regulatory filing are patently unrelated to either (i) developing artificial intelligence technology solutions and selling those solutions as products or services or (ii) deploying artificial intelligence to solve business problems, it will remove such company from the base index universe (the "company relevance screen"). For example, according to the index sponsor, six companies were removed from the base index universe during the June 2018 annual rebalancing as a result of the company relevance screen. However, the company relevance screen is not a screen for context or relevance of search phrase hits of companies that remain in the index. If a company remains in the index, all of its search hits are assumed to be relevant. For example, if a company is not excluded based on the company relevance screen and such company's annual regulatory filing contains many search phrase matches, but only one or a few of such matches are contextually related to the development or use of artificial intelligence, all of the company's search phrase matches will nonetheless be included in the calculation of its document score. Further, there is no guarantee that the company relevance screen applied by the index sponsor will successfully remove companies that do not develop or use artificial intelligence technology or that any such determinations will be accurate.

The Index Weightings May Be Ratably Rebalanced into the Money Market Position on Any or All Days During the Term of the Notes and, Historically, a Very Significant Portion of the Index's Exposure Consistently Has Been Allocated to the Money Market Position

The index has a daily volatility control feature which can result in a rebalancing between the underlying stocks and the money market position. This has the effect of reducing the exposure of the index to the performance of the underlying stocks by rebalancing a portion of the exposure into the money market position if the annualized historical realized volatility of the underlying stocks for the applicable 20 index business day volatility cap period would otherwise exceed the volatility cap of 8%. See “The Index Total Return Index Rebalancing” below.

On any index business day, the weight of the underlying stocks in the total return index can be rebalanced into the money market position, but there is no guarantee any such rebalancing into the money market position will occur. Any rebalancing into the money market position will limit your return on the notes. Historically, a very significant portion (up to approximately 78.6%) of the index’s exposure consistently has been allocated to the money market position. See “The Index – Average Allocation Between the Base Index and the Money Market Position for Each Month” below for hypothetical and historical data regarding the index’s exposure to the money market position.

In addition, there is no guarantee that the volatility cap will successfully reduce the volatility of the index or avoid any volatile movements of any underlying stock. If there is a rapid and severe decline in the market prices of the underlying stocks, the index may not rebalance into the money market position until the index has declined by a substantial amount.

The historical realized volatility of the base index is measured based on the actual historical composition of the base index during the applicable 20 index business day volatility cap period. As a result, the volatility of underlying stocks included in the base index during the 20 index business day volatility cap period will continue to influence the measurement of annualized historical realized volatility for a period of time during and following the annual five-day base index rebalancing period, even if such underlying stocks are no longer included in the base index on the measurement date. Furthermore, the volatility of underlying stocks included, or included with increased target weightings, during the five-day base index rebalancing period may not be fully reflected in the measurement of annualized historical realized volatility.

The Index Has a Limited Operating History

The notes are linked to the performance of the index, which was launched on October 30, 2018. Because the index has no index level history prior to that date, limited historical index level information will be available for you to consider in making an independent investigation of the index performance, which may make it difficult for you to make an informed decision with respect to the notes.

The hypothetical performance data prior to the launch of the index on October 30, 2018 refers to performance data that was derived using the index rules as of October 30, 2018, but applied retroactively using historical underlying stock and notional interest rate levels. No future performance of the index can be predicted based on the hypothetical performance data or the historical index performance information described herein.

In addition, the hypothetical performance data reflects a significant increase in the number of index constituents over time and the composition of the current index is materially different from that of the hypothetical index for prior years. As a result, such hypothetical performance data should not be relied upon when making your investment decision.

Each Underlying Stock's Weight Is Limited by the Weight Constraint and the Daily Volatility Constraint

Each year on the base index observation date, the index sponsor sets the target weights for the underlying stocks based on such stock's exposure to the artificial intelligence theme (determined using keyword searches of companies' annual regulatory filings and the BM25 algorithm), subject to constraints on the minimum and maximum weight of each underlying stock. From the target weight, a set number of shares of the underlying stock is determined, and the change to the number of shares of the underlying stock tracked by the index is implemented incrementally over the five-day base index rebalancing period to match the number set on the base index observation date. The calculation of an underlying stock's weight in the index is impacted by its closing price, which means market movement during the rebalancing period will likely result in actual weights at the end of such rebalancing period (and afterward) being higher or lower than the target weights. The minimum and maximum weight constraints could lower your return versus an investment that was not subject to the minimum and maximum weighting allotted to any one underlying stock.

In addition, the index's daily volatility target may result in a very significant portion of the index's exposure being allocated to the money market position. Historically, a very significant portion (up to approximately 78.6%) of the index's exposure consistently has been allocated to the money market position. The volatility target represents an intended trade-off, in which some potential upside is given up in exchange for attempting to limit downside exposure in volatile markets. However, because the notes provide for the repayment of principal at maturity, the incremental benefit to holders of the notes from the index's volatility target may be limited (though a note without the volatility control feature would also not likely provide the same level of principal protection). In other words, the notes themselves limit exposure to decreases in the level of the index by providing for a cash settlement amount that will be no less than the face amount of the notes. Due to this feature of the notes, the index's volatility target, which attempts to reduce downside exposure to the underlying stocks, may not be as beneficial as it otherwise may be (including, for example, when used with securities that provide for a cash settlement amount that could be less than the face amount) and the cost of the index's volatility target, which is reflected in part in the above referenced trade-off, may not be desirable to you.

Correlation of Performances Among the Underlying Stocks May Reduce the Performance of the Index

Performances of the underlying stocks may become highly correlated from time to time during the term of the notes, including, but not limited to, periods in which there is a substantial decline in the technology sector. High correlation among underlying stocks during periods of negative returns could have an adverse effect on the level of the index.

The Selection Criteria Used to Select the Underlying Stocks May Result in Larger Declines in the Value of the Index Than Those Experienced by Other Stock Indices

The index sponsor determines the U.S. exchange listed securities included in the index and their weightings based, in part, on a methodology for identifying those companies that may benefit from the development of artificial intelligence. Such index methodology determines exposure to the artificial intelligence theme based on the relevant keyword searches of companies' most recent annual regulatory filings, taking into account search phrase frequency within the document, document length (relative to the average document length across all documents in the search corpus) and the rareness of search phrases (measured by the frequency with which the search phrase appears across all documents in the search corpus). This means that a company can be included in the index even if it derives a majority of its revenue from, or focuses the majority of its business on, products and services that do not relate to the development or use of artificial intelligence. Therefore, even if the performance of a company's products and services relating to artificial intelligence is positive, the performance of the company as a whole may be negative due to the performance of products and services not related to artificial intelligence. The metrics used to select the companies may lead to a company being included in the index that ultimately does not have sustainable growth – due to factors relating to the development of artificial intelligence or changes thereto, due to factors relating to a company's products and services that do not relate to the development of artificial intelligence or due to other factors – which could negatively affect the level of the index and, therefore, the cash settlement amount on your notes on the stated maturity date and the market value of your notes before that date.

The index may not perform as well as a broad-based stock index or a stock index selected using different criteria, and as a result the cash settlement amount may be less than it would have been if your notes were linked to a different index. For example, see "The Index – Comparative Performance of the Index and Two Broad-Based Stock Indices" below for hypothetical and historical data regarding the index's performance relative to the Russell 3000® Index and the S&P 500® Index.

While the Weight of Each Underlying Stock for Each Annual Rebalancing Will Be Determined on a Single Day (the Base Index Observation Day), the Rebalancing Based on Such Revised Weights Will Be Implemented Over a Base Index Rebalancing Period

For purposes of each annual base index rebalancing, the target weight of each underlying stock will be determined on a related base index observation day. While the target weight of each underlying stock for each annual base index rebalancing will be determined on a single day (i.e., such base index observation day), the rebalancing of the number of shares of each underlying stock based on such revised target weights will be implemented over a base index rebalancing period comprised of five base index rebalancing days, which consist of the day that is three index business days after the applicable base index observation day and the four following index business days, subject to adjustment. As a result, for the first four days of the base index rebalancing period, the composition of the index will contain a mix of underlying stocks, share numbers and weights that is different than the underlying stocks and their respective share numbers and weights at the end of such base index rebalancing period. Therefore, the composition of the index will be materially different during the base index observation days as compared to the composition of the index after the annual base index rebalancing takes effect, and the levels of the index on such base index observation days may be lower than such levels would have been if the annual base index rebalancing had been implemented in full in one day, which could have an adverse impact on any payments on, and the value of, your notes and the trading market for your notes. For a discussion of how the index is rebalanced, see "The Index" below.

Index Market Disruption Events Could Affect the Level of the Index on Any Date

If a base index rebalancing day or a total return index rebalancing day must be effected on an index business day on which an index market disruption event occurs with respect to any underlying stock, the index calculation agent shall then rebalance the index as described in "The Index — Index Market Disruptions" herein.

In particular, if an index market disruption event occurs with respect to an underlying stock on a base index rebalancing day, such affected underlying stock will not be rebalanced based on its target weight during the applicable base index rebalancing period. Instead, the number of shares of such underlying stock will remain the same as the number of shares of such underlying stock on the index business day prior to the base index rebalancing day on which it was first affected by such index market disruption event. The weights of all other underlying stocks not affected by an index market disruption event will be updated such that each underlying stock not affected by an index market disruption event will have a weight within the remaining weight of the base index not allocated to the weight of the underlying stock(s) affected by an index market disruption event that is proportional to its original target weight relative to the original target weights of all other underlying stocks not affected by an index market disruption event. Further, the target weights of the underlying stocks will not be recalculated until the next base index observation day (i.e., a year later).

Thus, an underlying stock that was to have its target weight increased relative to the prior year may not realize an increase to such degree or at all. Similarly, an underlying stock that was to have its target weight decreased relative to the prior year may not realize a decrease to such degree or at all. In all cases, an index market disruption event will affect the weights of all of the underlying stocks (due to the update made to the weights of all underlying stocks not affected by an index market disruption event through a proportional reallocation of the remaining weight of the base index not allocated to the weight of the underlying stock or underlying stocks affected by an index market disruption event), and may have an adverse impact on the level of the index, potentially for a year until the next annual base index rebalancing.

Further, if on a base index observation day, a stock that was not included in the index on the previous index business day is affected by an index market disruption event, such stock will be excluded from the index, regardless of its exposure to the artificial intelligence theme. Therefore, if a stock would have been included in the base index except for the fact that it was affected by an index market disruption event on the base index observation date, the underlying stocks included in the index would have a higher target weight in the index than if such excluded stock had not been affected by an index market disruption event on the base index observation date and was therefore included in the index.

An Investment in the Offered Notes Is Subject to Risks Associated with Non-U.S. Securities

The value of your notes is linked to an index that includes or may include ADRs representing interests in shares of companies from one or more non-U.S. securities markets. Investments linked to the value of non-U.S. equity securities involve particular risks. Any non-U.S. securities market may be less liquid, more volatile and affected by global or domestic market developments in a different way than are the U.S. securities market or other non-U.S. securities markets. Both government intervention in a non-U.S. securities market, either directly or indirectly, and cross-shareholdings in non-U.S. companies, may affect trading prices and volumes in that market.

The prices of securities in a non-U.S. country are subject to political, economic, financial and social factors that are unique to such non-U.S. country’s geographical region. These factors include: recent changes, or the possibility of future changes, in the applicable non-U.S. government’s economic and fiscal policies; the possible implementation of, or changes in, currency exchange laws or other laws or restrictions applicable to non-U.S. companies or investments in non-U.S. equity securities; fluctuations, or the possibility of fluctuations, in currency exchange rates; and the possibility of outbreaks of hostility, political instability, natural disaster or adverse public health developments. For example, the United Kingdom has voted to leave the European Union (popularly known as “Brexit”). The effect of Brexit is uncertain, and Brexit has and may continue to contribute to volatility in the prices of securities of companies located in Europe and currency exchange rates, including the valuation of the euro and British pound in particular. Any one of these factors, or the combination of more than one of these factors, could negatively affect such non-U.S. securities market and the price of securities therein. Further, geographical regions may react to global factors in different ways, which may cause the prices of securities in a non-U.S. securities market to fluctuate in a way that differs from those of securities in the U.S. securities market or other non-U.S. securities markets. Non-U.S. economies may also differ from the U.S. economy in important respects, including growth of gross national product, rate of inflation, capital reinvestment, resources and self-sufficiency, which may have a positive or negative effect on non-U.S. securities prices.

In addition, to the extent that companies in the index are non-U.S. companies or engage in manufacturing outside of the United States, the imposition of tariffs on imports from such countries or taxes on operations outside of the United States can affect the profitability of such companies and the price of their shares.

There are Important Differences Between ADRs and the Shares the ADRs Represent

There are important differences between the rights of holders of ADRs and the rights of holders of the shares the ADRs represent. ADRs are typically issued pursuant to a deposit agreement, which sets forth the rights and responsibilities of the ADR depositary, the company issuing the shares the ADRs represent, and the holders of the ADRs. The rights of the holders of the ADRs may be different from the rights of the holders of the shares the ADRs represent. For example, a company may make distributions in respect of its shares that are not passed on to the holders of its ADRs. Any such differences between the rights of holders of the ADRs and the rights of holders of the shares the ADRs represent may be significant and may materially and adversely affect the value of the ADRs, the performance of the index and, as a result, the notes.

The Level of the Index is Subject to Non-U.S. Currency Exchange Rate Risk

ADRs that may be included in the index are quoted and traded in U.S. dollars on a U.S. stock exchange, while the shares represented thereby are quoted and traded in the relevant non-U.S. currency on other stock exchanges. Therefore, fluctuations in the exchange rate between currencies in which the relevant shares are quoted and traded and the U.S. dollar will likely affect the relative value of the ADRs. As a result, the market price of the ADRs, which trade on a

U.S. stock exchange, will likely be affected. These trading differences and currency exchange rates may affect the closing prices of the ADRs and, as a result, the level of the index and the value of the notes. Currency exchange rates vary over time, and may vary considerably during the life of your notes. Changes in a particular exchange rate result from the interaction of many factors directly or indirectly affecting economic and political conditions. Of particular importance are:

- rates of inflation;
- interest rate levels;
- the balance of payments among countries;
- the extent of government surpluses or deficits in the relevant non-U.S. country and the United States; and
- other financial, economic, military and political factors.

All of these factors are, in turn, sensitive to the monetary, fiscal and trade policies pursued by the governments of the relevant non-U.S. countries and the United States and other countries important to international trade and finance.

The level of the index and any payment on the notes could also be adversely affected by delays in, or refusals to grant, any required governmental approval for conversions of a local currency and remittances abroad with respect to the ADRs or other de facto restrictions on the repatriation of U.S. dollars.

The Index May Include Exposure to the Short-Term Treasury Bond ETF Position

If, on a base index observation day, in the very unlikely circumstance that the sum of the target weights for the underlying stocks is less than 1, the base index will include the short-term treasury bond ETF position at a target weight equal to the difference between 1 and the target weights of all underlying stocks included in the base index. The short-term treasury bond ETF position is intended to express the notional returns accruing to a hypothetical investor from an investment in the iShares Short Treasury Bond ETF (the “underlying ETF”), which is comprised of publicly-issued U.S. Treasury securities that have a remaining maturity of greater than one month and less than or equal to one year. If the index includes the short-term treasury bond ETF position in the limited circumstance described above, the notes will be subject to certain risks similar to those associated with a direct investment in U.S. Treasury bonds, including, among others, risks associated with a downgrade of the credit rating of the U.S. government, risks associated with an increase in possibility that the U.S. Treasury may default on its obligations (whether for credit or legislative process reasons) and risks associated with any market events that create a decrease in demand for U.S. Treasury bonds. Any of these risks would significantly adversely affect the underlying ETF, especially if the risks are concentrated in U.S. Treasury bonds with short-term maturities. Further, the value of a share of the underlying ETF may reflect transaction costs and fees incurred or imposed by the investment advisor of the underlying ETF as well as the costs to the underlying ETF to buy and sell its assets. These costs and fees are not included in the calculation of the index.

The Index Calculation Agent Will Have Authority to Make Determinations that Could Affect the Value of Your Notes and the Amount You Receive at Maturity. The Goldman Sachs Group, Inc. Owns a Non-Controlling Interest in the Index Calculation Agent

The index sponsor has appointed Solactive AG as the index calculation agent. As index calculation agent, Solactive AG calculates the value of the index and, as further described under the “The Index” in this prospectus supplement, has discretion with respect to determining index market disruption events and with respect to making certain adjustments to the underlying stocks upon corporate events. The exercise of this discretion by the index calculation agent could adversely affect the value of your notes.

The Goldman Sachs Group, Inc., our parent company and the guarantor of the notes, owns a non-controlling interest in the index calculation agent.

The Policies of the Index Sponsor and Changes That Affect the Index or the Underlying Stocks Could Affect the Cash Settlement Amount on Your Notes and Their Market Value. The Goldman Sachs Group, Inc. Owns a Non-Controlling Interest in the Index Sponsor

The policies of the index sponsor concerning the calculation of the level of the index, additions, deletions or substitutions of underlying stocks and the timing and manner in which changes affecting the underlying stocks or their issuers, such as stock dividends, reorganizations or mergers, are reflected in the level of the index could affect the level of the index and, therefore, the cash settlement amount on your notes on a call payment date or the stated maturity date and the market value of your notes before that date. For example, the index sponsor will not make an adjustment as a result of a dividend on an underlying stock until the ex-date. Therefore, if a dividend is declared on an underlying stock and, due to an annual rebalancing, such underlying stock is subsequently removed from the index before the applicable ex-date, the

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declared dividend will never be reinvested in the underlying stock, and therefore the level of the index will not benefit from such dividend.

The cash settlement amount on your notes 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 level of the index or the method by which it constructs the index, or if the index sponsor discontinues or suspends calculation or publication of the level of the index, in which case it may become difficult to determine the market value of your notes. In addition, an index committee is responsible for overseeing the index, its methodology and the implementation thereof, and may make determinations about the index that affect your notes. None of us, The Goldman Sachs Group, Inc., the index calculation agent or the note calculation agent (which initially will be GS&Co., our affiliate) appoints, or advises on the appointment of, index committee members.

If events such as these occur, or if the closing level of the index is not available on the determination date because of an index market disruption event or for any other reason, the note calculation agent may determine the closing level of the index on the determination date — and thus the cash settlement on the stated maturity date — in a manner it considers appropriate, in its sole discretion. We describe the discretion that the note calculation agent will have in determining the closing level of the index on the determination date and the cash settlement on your notes more fully under "Specific Terms of Your Notes — Discontinuance or Modification of the Index" and "— Role of Note Calculation Agent" below.

The Goldman Sachs Group, Inc., our parent company and the guarantor of the notes, owns a non-controlling interest in Motif Investing Inc., the index sponsor's ultimate parent company.

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, the index or your notes.

In accordance with the index methodology, if the index committee determines on a USD LIBOR interest determination date that 3-month USD LIBOR has been discontinued, then the index committee shall replace 3-month USD LIBOR with 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 index committee determines there is an industry-accepted successor rate, then the index committee shall use such successor rate. If the index committee has determined a substitute or successor rate in accordance with the foregoing, the index committee in its sole discretion may determine an alternative to London business day, USD LIBOR interest determination date and notional interest rate reset date to be used, and any other relevant methodology for calculating such substitute or successor rate, including any adjustment factor needed to make such substitute or successor rate comparable to 3-month USD LIBOR, in a manner that is consistent with industry-accepted practices for such substitute or successor rate. See "The Index" on page S-32. As discussed above under "— The Index Measures the Performance of the Total Return Index Less the Sum of the Return on the Notional Interest Rate Plus 0.75% Per Annum (Accruing Daily)", changes in the level of the notional interest rate may offset changes in the levels of the index underlying assets.

In addition, historically, a very significant portion (up to approximately 78.6%) of the index exposure consistently has been to the money market position, which reflects the notional returns accruing to a hypothetical investor from an investment in a notional money market account denominated in U.S. dollars that accrues interest at the notional interest rate. As a result, the discontinuance of 3-month USD LIBOR and the use of a substitute or successor rate may affect the performance of the index and the amount payable in respect of 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

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 Historical Levels of the Notional Interest Rate Are Not an Indication of the Future Levels of the Notional Interest Rate

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

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

The following factors, among others, many of which are beyond our control, may influence the market value of your notes:

- the volatility – i.e., the frequency and magnitude of changes – in the level of the index;
- the level of the index, including the initial index level;
- dividend rates of the underlying stocks;
- 3-month USD LIBOR;
- economic, financial, regulatory, political, military and other events that affect stock markets generally, or the sectors and sub-industries included in the index, and the underlying stocks in particular, and which may affect the closing levels of the index;
- interest rates and yield rates in the market;
- the time remaining until your notes mature; and
- our creditworthiness and the creditworthiness of The Goldman Sachs Group, Inc., whether actual or perceived, 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. If you sell your notes before maturity, you may receive less than the face amount of your notes.

You cannot predict the future performance of the index based on its historical performance or on any hypothetical performance data. The actual performance of the index over the life of the notes, as well as the cash settlement amount payable on the stated maturity date, may bear little or no relation to the historical index performance information, hypothetical performance data or hypothetical return examples shown elsewhere in this prospectus supplement.

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 in cash that you will be paid for your notes on a call payment date or 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 call payment 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 call payment 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

Your notes may trade quite differently from 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 level of the index increases above the initial index level during the life of the notes, the market value of your notes may not increase by the same amount. We discuss some of the reasons for this disparity under "— The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors" above.

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 a call payment date or the stated maturity date, as the case may be, may bear little relation to the historical index performance information, hypothetical performance data or hypothetical return examples set forth elsewhere in this prospectus supplement. We cannot predict the future performance of the index.

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, the underlying stocks and 3-month USD LIBOR. 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, the underlying stocks or 3-month USD LIBOR, at any time and from time to time, and to unwind the hedge by selling any of the foregoing on or before the determination 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 the index, the underlying stocks or 3-month USD LIBOR.

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 Gol