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December 2022 MOBU 5S ER Index Supplement Addendum to the MOBU 5S ER Index Supplement, the Prospectus Supplement and the Prospectus, each as may be amended from time to time, that form a part of Registration Statement No. 333-253421

Filed Pursuant to Rule 424(b)(3)  
Registration Statement No. 333-253421



## GS Finance Corp.

Medium-Term Notes, Series F  
guaranteed by

**The Goldman Sachs Group, Inc.**

### GS Momentum Builder® Multi-Asset 5S ER Index

The GS Momentum Builder® Multi-Asset 5S ER Index (the index) measures the extent to which the performance of the exchange-traded funds and a money market position (together with the ETFs, the underlying assets) included in the index outperform the sum of the return on the notional interest rate plus 0.65% per annum (accruing daily). The notional interest rate is the Secured Overnight Financing Rate (SOFR) plus 0.26161%. The money market position reflects the notional returns accruing to a hypothetical investor from an investment in a money market account denominated in U.S. dollars that accrues interest at the notional interest rate. The index rebalances on each index business day from among 15 underlying assets that have been categorized in the following asset classes: broad-based equities; fixed income; emerging markets; alternatives; commodities; inflation; and cash equivalent. The index attempts to track the positive price momentum in the underlying assets, subject to limitations on volatility and a minimum and maximum weight for each underlying asset and each asset class, each as described below.

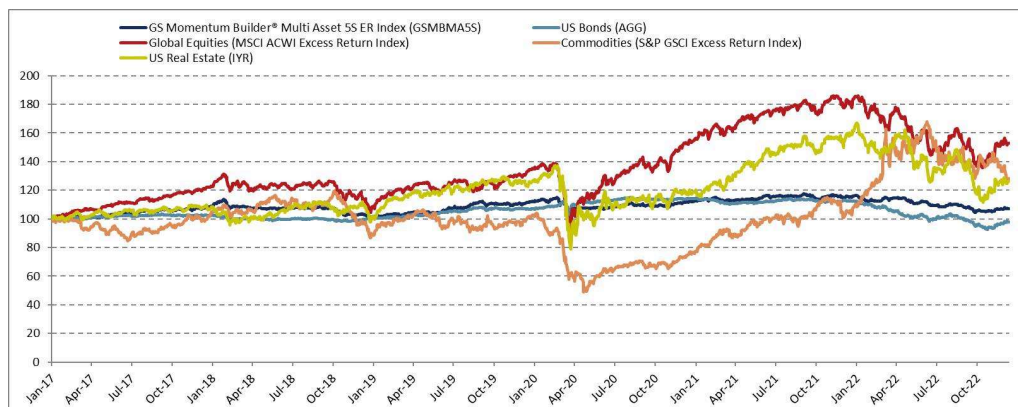
**Prior to February 4, 2022, the index measured the extent to which the performance of the selected underlying assets outperformed the sum of the return on 3-month USD LIBOR plus 0.65% per annum (accruing daily). Further, prior to such date, the money market position reflected notional returns accruing to a hypothetical investor from an investment in a money market account denominated in U.S. dollars that accrued interest at 3-month USD LIBOR, which return was always less than the sum of the return on 3-month USD LIBOR plus 0.65% per annum (accruing daily). As a result, extremely limited historical information regarding the performance of the index subsequent to its discontinued use of 3-month USD LIBOR is available, which may make it difficult for you to make an informed decision with respect to an investment in the notes.**

Features of the index include:

- daily rebalancing from among the 15 eligible underlying assets on each index business day (in this context, a base index rebalancing day) by calculating, for each day in the weight averaging period related to that base index rebalancing day, the combination of underlying assets that would have provided the highest historical return during three return look-back periods (nine months, six months and three months), subject to:
  - a limit of 5% on the degree of variation in the daily closing prices or closing level, as applicable, of the aggregate of such underlying assets over the related realized volatility look-back periods (the prior six months, three months and one month for the nine-month, six-month and three-month return look-back periods, respectively); and
  - a minimum and maximum weight for each underlying asset and each asset class; and
- the potential for daily total return index rebalancing into the money market position, based on whether the realized volatility of the underlying assets comprising the index exceeds the volatility cap of 6% for the applicable volatility cap period (the prior one month).

### Historical Information\*

The following chart and table provide a comparison between the index and certain classes of assets (in each case, represented by a benchmark ETF or a benchmark index, which are distinct from the asset classes in which the 15 underlying assets have been categorized for purposes of this index) from January 1, 2017 to December 12, 2022.



\* Index data reflects the index's use of 3-month USD LIBOR prior to February 4, 2022. The index discontinued use of 3-month USD LIBOR for all purposes on February 4, 2022 and replaced such rate with SOFR plus 0.26161%. Therefore, extremely limited information regarding the performance of

the index subsequent to its discontinued use of 3-month USD LIBOR is available, which may make it difficult for you to make an informed decision with respect to an investment in the notes.

*Your investment in securities linked to the index involves certain risks. See "Selected Risk Factors" on page S-5 to read about investment risks relating to such securities.*

**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 index supplement addendum, the applicable pricing supplement, the applicable product supplement, if any, the accompanying MOBU 5S ER index supplement, the accompanying prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.**

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

**Goldman Sachs & Co. LLC**

December 2022 MOBU 5S ER Index Supplement Addendum dated December 22, 2022.

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## December 2022 MOBU 5S ER Index Supplement Addendum

Dated December 22, 2022

As of December 12, 2022	GS Momentum Builder® Multi Asset 5S ER Index (GSBMA5S)*****	US Bonds (AGG)	Global Equities (MSCI ACWI Excess Return Index)	Commodities (S&P GSCI Excess Return Index)	US Real Estate (IYR)
Effective Performance (1 Month)	0.61%	2.60%	1.09%	-8.59%	1.68%
Effective Performance (6 Month)	-2.61%	-0.87%	3.69%	-22.04%	-0.49%
Annualized* Performance (since January 2017)	1.17%	-0.37%	7.43%	4.30%	4.03%
Annualized* Realized Volatility (since January 2017)**	5.34%	5.25%	15.87%	23.23%	21.87%
Return over Risk (since January 2017)***	0.22	-0.07	0.47	0.19	0.18
Maximum Peak-to-Trough Drawdown****	-11.49%	-19.32%	-33.82%	-59.02%	-42.39%

\* Calculated on a per annum percentage basis.

\*\* Calculated on the same basis as realized volatility used in calculating the index.

\*\*\* Calculated by dividing the annualized performance by the annualized realized volatility since January 1, 2017.

\*\*\*\* The largest percentage decline experienced in the relevant measure from a previously occurring maximum level.

\*\*\*\*\* Index data reflects the index's use of 3-month USD LIBOR prior to February 4, 2022. The index discontinued use of 3-month USD LIBOR for all purposes on February 4, 2022 and replaced such rate with SOFR plus 0.26161%. Therefore, extremely limited information regarding the performance of the index subsequent to its discontinued use of 3-month USD LIBOR is available, which may make it difficult for you to make an informed decision with respect to an investment in the notes.

As a result, the above chart and table do not reflect the global financial crisis which began in 2008, which had a materially negative impact on certain of the benchmark ETFs, benchmark indices and eligible underlying assets and would have had a materially negative impact on the index. Please also note that the benchmark ETFs and benchmark indices that are used to represent asset classes for purposes of the above table and chart may not be eligible underlying assets for purposes of the index and in some cases differ from the eligible underlying assets that are used to represent classes of assets with the same or similar titles for purposes of the index. **You should not take the historical index information or historical benchmark ETF and benchmark index data as an indication of the future performance of the index.**

#### Monthly Performance Since January 2017\*\*

The following chart sets forth historical monthly index performance data during the period from January 1, 2017 to November 30, 2022 based on the historical index information previously supplied above. **You should not take the historical index information as an indication of the future performance of the index.**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2022	-2.82%	0.59%	0.72%	-1.99%	-0.37%	-2.38%	1.09%	-1.77%	-2.95%	0.30%	1.72%		-7.72%*
2021	-0.37%	0.15%	0.14%	0.84%	0.89%	0.66%	0.56%	0.59%	-2.81%	2.09%	-1.09%	1.46%	3.07%
2020	-0.22%	-2.04%	-2.00%	0.14%	0.63%	0.28%	1.88%	-0.43%	-0.90%	-0.97%	2.76%	1.78%	0.79%
2019	1.61%	-0.54%	1.87%	0.15%	-0.18%	2.62%	0.42%	3.69%	-1.19%	0.53%	-0.47%	1.29%	10.11%
2018	2.79%	-3.15%	-0.59%	-0.59%	0.18%	0.47%	-0.01%	0.56%	-0.60%	-4.56%	0.40%	-1.53%	-6.62%
2017	0.35%	0.73%	0.36%	0.80%	1.08%	0.34%	1.67%	0.71%	-0.61%	0.90%	0.93%	1.28%	8.86%

\* To November 30, 2022

\*\* Index data reflects the index's use of 3-month USD LIBOR prior to February 4, 2022. The index discontinued use of 3-month USD LIBOR for all purposes on February 4, 2022 and replaced such rate with SOFR plus 0.26161%. Therefore, extremely limited information regarding the performance of the index subsequent to its discontinued use of 3-month USD LIBOR is available, which may make it difficult for you to make an informed decision with respect to an investment in the notes.

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**Composition Weightings**

As of December 12, 2022, the following chart sets forth the weighting of each eligible underlying asset and the historical average percentage weightings of the eligible underlying assets, the highest percentage weightings of the eligible underlying assets and the percentage of index business days with positive weightings for the eligible underlying assets from January 1, 2017 to December 12, 2022 (the period for which eligible underlying assets is available). This data reflects the same historical information as in the previous tables. **You should not take the historical information as an indication of the future performance of the index.**

Eligible Underlying Asset	Weighting (as of December 12, 2022)*	Average Weighting	Highest Weighting	Percentage of Index Business Days When Underlying Asset is Included as an Index Underlying Asset
SPDR® S&P 500® ETF Trust	0.00%	9.17%	20.00%	91.72%
iShares® MSCI EAFE ETF	0.00%	4.14%	20.01%	68.87%
iShares® MSCI Japan ETF	0.00%	2.82%	10.00%	64.46%
iShares® 20+ Year Treasury Bond ETF	0.00%	6.47%	19.64%	78.69%
iShares® iBoxx \$ Investment Grade Corporate Bond ETF	0.68%	6.34%	19.88%	75.08%
iShares® iBoxx \$ High Yield Corporate Bond ETF	10.75%	5.65%	19.07%	95.59%
iShares® 7-10 Year Treasury Bond ETF	20.00%	6.61%	20.00%	79.96%
iShares® MSCI Emerging Markets ETF	0.35%	3.70%	18.26%	64.33%
iShares® U.S. Real Estate ETF	0.00%	5.90%	19.90%	79.09%
iShares® Preferred and Income Securities ETF	2.58%	3.32%	9.95%	84.57%
iShares® Biotechnology ETF	0.50%	1.91%	8.42%	75.89%
SPDR® S&P® Oil & Gas Exploration & Production ETF	0.68%	2.90%	15.77%	71.81%
SPDR® Gold Trust	4.45%	7.01%	19.93%	83.90%
iShares®TIPS Bond ETF	9.99%	5.15%	10.00%	88.18%
Money Market Position*	50.01%	28.92%	50.01%	98.73%

\* Prior to February 4, 2022, the money market position reflected notional returns accruing to a hypothetical investor from an investment in a money market account denominated in U.S. dollars that accrued interest at 3-month USD LIBOR

**Eligible Underlying Assets**

The following is a list of the eligible underlying assets for the index, including the related asset classes, asset class minimum and maximum weights and underlying asset minimum and maximum weights.

Asset Class	Asset Class		Eligible Underlying Asset*	Ticker	Underlying Asset	
	Minimum Weight	Maximum Weight			Minimum Weight	Maximum Weight
Broad-Based Equities	0%	50%	SPDR® S&P 500® ETF Trust	SPY	0%	20%
			iShares® MSCI EAFE ETF	EFA	0%	20%
			iShares® MSCI Japan ETF	EWJ	0%	10%
Fixed Income	0%	50%	iShares® 20+ Year Treasury Bond ETF	TLT	0%	20%
			iShares® iBoxx \$ Investment Grade Corporate Bond ETF	LQD	0%	20%
			iShares® iBoxx \$ High Yield Corporate Bond ETF	HYG	0%	20%
			iShares® 7-10 Year Treasury Bond ETF	IEF	0%	20%
Emerging Markets	0%	20%	iShares® MSCI Emerging Markets ETF	EEM	0%	20%
Alternatives	0%	25%	iShares® U.S. Real Estate ETF	IYR	0%	20%
			iShares® Preferred and Income Securities ETF	PFF	0%	10%
			iShares® Biotechnology ETF	IBB	0%	10%
Commodities	0%	25%	SPDR® S&P® Oil and Gas Exploration & Production ETF	XOP	0%	20%

			SPDR® Gold Trust	GLD	0%	20%
<b>Inflation</b>	0%	10%	iShares® TIPS Bond ETF	TIP	0%	10%
<b>Cash Equivalent</b>	0%	50%**	Money Market Position	N/A	0%	50%**

\* The value of a share of an eligible ETF may reflect transaction costs and fees incurred or imposed by the investment advisor of the eligible ETF as well as the costs to the ETF to buy and sell its assets. These costs and fees are not included in the calculation of the index underlying the eligible ETF.

\*\* With respect to the money market position, the related asset class maximum weight and underlying asset maximum weight limitations do not apply after the first rebalancing on each index business day and, therefore, the index may allocate its entire exposure to the money market position.

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## Selected Risk Factors

An investment in securities linked to the index is subject to the risks described below as well as the risks and considerations described in the accompanying MOBU 5S ER index supplement no. 48, the applicable pricing supplement, the applicable product supplement, if any, the accompanying prospectus supplement and the accompanying prospectus. The following risk factors are discussed in greater detail in the applicable pricing supplement and the accompanying MOBU 5S ER index supplement no. 48.

### Risks Related to the Index

- The Index Measures the Performance of the Index Underlying Assets Less the Sum of the Return on the Notional Interest Rate Plus 0.65% Per Annum (Accruing Daily)
- Your Investment in the Securities May Be Subject to Concentration Risks. The assets underlying an eligible underlying asset may represent a particular market or commodity sector, a particular geographic region or some other sector or asset class. As a result, your investment in the securities may be concentrated in a single sector or asset class even though there are maximum weights for each underlying asset and each asset class
- You May Not Have Exposure to One or More of the Eligible Underlying Assets During the Term of the Securities
- The Weight of Each Index Underlying Asset Reflects the Average of the Average of the Weights of Such Index Underlying Asset Over Three Potential Portfolios For Each Day in the Applicable Weight Averaging Period
- The Index May Not Successfully Capture Price Momentum and May Not Achieve its Target Volatility
- Asset Class Maximum Weights Will in Many Cases Prevent All of the Eligible Underlying Assets in an Asset Class From Being Included in the Index at Their Underlying Asset Maximum Weights and May Also Prevent the Index From Having Exposure to Certain Types of Assets At Any Given Time
- Each Index Underlying Asset's Weight Is Limited by Its Underlying Asset Maximum Weight, Its Asset Class Maximum Weight and the Volatility Constraint
- If the Level of the Index Changes, the Market Value of Your Securities May Not Change in the Same Manner
- Past Index Performance is No Guide to Future Performance
- The Lower Performance of One Index Underlying Asset May Offset an Increase in the Other Index Underlying Assets
- Because Historical Returns and Realized Volatility Are Measured on an Aggregate Basis, Index Underlying Assets Could Include Eligible Underlying Assets With a High Realized Volatility and Could Exclude Eligible Underlying Assets With a High Historical Return
- Correlation of Performances Among the Index Underlying Assets May Reduce the Performance of the Index
- The Index Calculation Agent Will Have Authority to Make Determinations that Could Affect the Value of Your Securities and the Amount You Receive at Maturity. The Goldman Sachs Group, Inc. Owns a Non-Controlling Interest in the Index Calculation Agent
- As Index Sponsor, GS&Co. Can Replace the Index Calculation Agent at Any Time
- The Index Calculation Agent Can Resign Upon Notification to the Index Sponsor
- The Index Weightings May Be Ratably Rebalanced into the Money Market Position on Any or All Days During the Term of the Securities
- The Index May Perform Poorly During Periods Characterized by Increased Short-Term Volatility
- Index Market Disruption Events Could Affect the Level of the Index on Any Date
- On February 4, 2022, the Index Discontinued Use of 3-Month USD LIBOR For All Purposes and Replaced Such Rate
- Certain Risks Related to SOFR
- The Historical Levels of the Notional Interest Rate Are Not an Indication of the Future Levels of the Notional Interest Rate

### Risks Related to the Eligible ETFs

#### *Risks Related to All of the Eligible ETFs*

- The Eligible ETFs Are Passively Managed To Track an Index and May Not Perform as Well as an Actively Managed Fund or Another Investment
- Except to the Extent That The Goldman Sachs Group, Inc. is the Issuer of Equity, Debt Securities or Preferred Stock in an Underlying Index, There is No Affiliation Between Us and Any Issuer of Assets Held by Any Eligible ETF or Any Sponsor of Any Eligible ETF
- The Policies of the Eligible ETF Sponsors and/or Investment Advisor, and the Policies of Any Sponsor of an Underlying Index Tracked by an Eligible ETF, Could Affect the Level of the Index
- There is No Assurance That an Active Trading Market Will Continue for the Eligible ETFs or That There Will Be Liquidity in Any Such Trading Market; Further, Each Eligible ETF is Subject to Management Risks, Securities Lending Risks and Custody Risks



- The Policies of the Index Sponsor, Index Committee and Index Calculation Agent, and Changes That Affect the Index or the Eligible ETFs, Could Affect the Amount Payable on Your Securities and Their Market Value

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- The Eligible ETFs May Be Subject to Pricing Dislocations and Other Market Forces, Which May Adversely Affect the Level of the Index
- The Values of the Eligible ETFs May Not Completely Track the Level of the Indices Underlying Such Eligible ETFs
- Your Investment is Subject to Investment-Grade Credit Risk

- The Eligible ETFs May Be Subject to Global or Regional Financial Risks, Which May Adversely Affect the Level of the Index

*Risks Related to Eligible ETFs Holding Foreign Assets (including the iShares® MSCI EAFE ETF, the iShares® MSCI Japan ETF, the iShares® iBoxx \$ High Yield Corporate Bond ETF, the iShares® iBoxx \$ Investment Grade Corporate Bond ETF, the iShares® Emerging Markets ETF and the iShares® Preferred and Income Securities ETF)*

- Your Securities Will Be Subject to Foreign Currency Exchange Rate Risk
- Regulators Are Investigating Potential Manipulation of Published Currency Exchange Rates
- Even Though Currencies Trade Around-The-Clock, Your Securities Will Not
- Intervention in the Foreign Currency Exchange Markets by the Countries Issuing Any Currency In Which an Asset Held by an Eligible ETF Trades or Is Denominated Could Adversely Affect the Level of the Index
- Suspensions or Disruptions of Market Trading in One or More Foreign Currencies May Adversely Affect the Value of Your Securities
- Your Investment in the Securities Will Be Subject to Risks Associated with Foreign Securities Markets
- Government Regulatory Action, Including Legislative Acts and Executive Orders, Could Result in Material Changes to the Composition of an Eligible ETF with Assets from One or More Foreign Securities Markets and Could Negatively Affect the Level of the Index

*Risks Related to Eligible ETFs Holding U.S. Government Debt Securities*

- Your Investment is Subject to Concentration Risks. Certain of the eligible ETFs invest in U.S. Treasury bonds that are all obligations of the United States, including the iShares® 20+ Year Treasury Bond ETF, the iShares® 7-10 Year Treasury Bond ETF and the iShares® TIPS Bond ETF. In addition, the iShares® 20+ Year Treasury Bond ETF invests in securities with a similar remaining time to maturity. As a result, these eligible ETFs are concentrated in the performance of bonds issued by a single issuer and having the same general tenor and terms
- ETFs Holding U.S. Government Bonds May Change in Unexpected Ways

*Risks Related to Eligible ETFs Holding Debt Securities*

*Risks Related to the iShares® Biotechnology ETF*

- The iShares® Biotechnology ETF Recently Changed Its Underlying Index and Has Limited Historical Information Tracking Its Underlying Index

*Risks Related to the iShares® Preferred and Income Securities ETF*

- There are Risks Associated with Preferred Stocks. The iShares® Preferred and Income Securities ETF currently holds primarily preferred stock. Unlike interest payments on debt securities, dividend payments on a preferred stock typically must be declared by the issuer's board of directors. An issuer's board of directors is generally not under any obligation to pay a dividend (even if such dividends have accrued) and may suspend payment of dividends on a preferred stock at any time. In the event an issuer of preferred stock experiences economic difficulties, the issuer's preferred stock may lose substantial value due to the reduced likelihood that the issuer's board of directors will declare a dividend and the fact that the preferred stock may be subordinated to other securities of the same issuer. Certain additional risks associated with preferred stock could adversely affect the value of the iShares® Preferred and Income Securities ETF.
- The iShares® Preferred and Income Securities ETF Has Limited Historical Information Tracking Its Underlying Index

*Risks Related to the iShares® TIPS Bond ETF*

- The iShares® TIPS Bond ETF includes inflation-protected bonds, which typically have lower yields than conventional fixed rate bonds because of their inflation adjustment feature

*Risks Related to the iShares® iBOXX \$ High Yield Corporate Bond ETF*

- The iShares® iBoxx \$ High Yield Corporate Bond ETF holds generally U.S. dollar-denominated liquid high yield corporate bonds, sometimes referred to as "junk" bonds. High yield bonds, compared to higher-rated securities of similar maturities, tend to have more volatile prices and increased price sensitivity to changing interest rates and to adverse economic and business developments, greater risk of loss due to default or declining credit quality, greater likelihood that adverse economic or company specific events will make the issuer of such bonds unable to make interest and/or principal payments, and greater susceptibility to negative market sentiments leading to depressed prices and decrease in liquidity

*Risks Related to the iShares® U.S. Real Estate ETF*

- The iShares® U.S. Real Estate ETF is Concentrated in Real Estate Companies and Does Not Provide Diversified



- Your Investment is Subject to Income Risk and Interest Rate Risk

Exposure. The iShares® U.S. Real Estate

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ETF invests in shares of companies that directly or indirectly invest in real estate. The performance of the real estate industry is affected by multiple factors, including general economic and political conditions, the availability of financing for real estate, governmental actions that affect real estate, liquidity in the real estate market and interest rates

- The iShares® U.S. Real Estate ETF Recently Changed the Index It Tracks
  - Legal and Regulatory Changes Could Adversely Affect the Level of the Index
- Risks related to SPDR® S&P® Oil & Gas Exploration & Production ETF*
- The SPDR® S&P® Oil & Gas Exploration & Production ETF is Concentrated in Oil & Gas Companies and Does Not Provide Diversified Exposure
  - Ongoing Commodities-Related Regulatory Investigations And Private Litigation Could Affect Prices for Commodities, Which Could Adversely Affect Your Securities
- Risks related to SPDR® Gold Trust*
- Termination or Liquidation of the SPDR® Gold Trust Could Adversely Affect the Value of the Index
  - Your Investment is Subject to Concentration Risks. The SPDR® Gold Trust is concentrated in a single commodity. As a result, the performance of the SPDR® Gold Trust will be concentrated in the performance of that specific commodity
  - Fees and Expenses Payable by the SPDR® Gold Trust Are Charged Regardless of Profitability and May Result in a Depletion of its Assets
  - Potential Discrepancies, or Future Changes, in the Calculation of the LBMA Gold Price PM Could Have an Adverse Effect on the Value of the SPDR® Gold Trust Shares
  - The Value of the Shares of SPDR® Gold Trust Relates Directly to the Value of the Gold Held by SPDR® Gold Trust and Fluctuations in the Price of Gold Could Materially Adversely Affect an Investment in SPDR® Gold Trust's Shares
  - The Amount of Gold Represented by the Shares of SPDR® Gold Trust Will Continue to Be Reduced During the Life of SPDR® Gold Trust Due to SPDR® Gold Trust's Expenses

### About This Index Supplement Addendum

GS Finance Corp. may use this index supplement addendum in the initial sale of the securities. In addition, Goldman Sachs & Co. LLC (GS&Co.), or any other affiliate of GS Finance Corp., may use this index supplement addendum in a market-making transaction in a security after its initial sale. ***Unless GS Finance Corp. or its agent informs the purchaser otherwise in the confirmation of sale, this index supplement addendum is being used in a market-making transaction.***

This index supplement addendum constitutes a supplement to the documents listed below and therefore should be read in conjunction with such documents:

- MOBU 5S ER index supplement no. 48 dated December 22, 2022
- Prospectus supplement dated March 22, 2021
- Prospectus dated March 22, 2021

We have not authorized anyone to provide any information or to make any representations other than those contained in or incorporated by reference in this index supplement addendum, the accompanying index supplement no. 48, the accompanying prospectus supplement or the accompanying prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide. This index supplement addendum is an offer to sell only the notes offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this index supplement addendum, the accompanying index supplement no. 48, the accompanying prospectus supplement and the accompanying prospectus is current only as of the respective dates of such documents.

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