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GOLDMAN SACHS COMMODITY TREND STRATEGY D012

OVERVIEW

Version 1.0

Dated: 9 September 2020

The information set out below is only an overview of the Goldman Sachs Commodity Trend Strategy D012 and must be read in conjunction with the Strategy Rules (as defined below). This overview is intended to highlight certain features of the Goldman Sachs Commodity Trend Strategy D012 and does not purport to be complete. It is summarised from, and is qualified in its entirety, by the actual Strategy Rules, which sets out the complete methodology of the Goldman Sachs Commodity Trend Strategy D012. Accordingly, this overview should be read as an introduction to the Strategy Rules.

1.   Relevant documentation elements

The Goldman Sachs Commodity Trend Strategy D012 (for the purposes of this overview, the "**GS Strategy**") is part of a group of synthetic rules-based proprietary strategies which Goldman Sachs International or its successor(s) as strategy sponsor may create from time to time. The complete rules and methodology applicable to the GS Strategy (the "**Strategy Rules**") are set out in the following documentation elements:

(i)   the Goldman Sachs Commodity Risk Premia Methodology Description dated 19 March 2018 (or any successor version) (the "**Commodity Risk Premia Methodology Description**");

(ii)   the Specifications Annex - Goldman Sachs Commodity Trend Strategy D012 dated 19 March 2018 (or any successor version) (the "**Specifications Annex**");

(iii)   the Goldman Sachs General Basket Strategy Base Description dated 22 January 2020 (or any successor version) (the "**General Basket Strategy Base Description**);

(iv)   the Goldman Sachs General Index Provisions dated 15 June 2017 (or any successor version) (the "**General Index Provisions**"); and

(v)   the Risk Factors – Goldman Sachs Commodity Trend Strategy D012 dated 9 September 2020 (or any successor version) (the "**Risk Factors**").

The relationship between these documentation elements may be summarised as follows:

(a)   the Commodity Risk Premia Methodology Description explains (I) how the immediate components are assigned a signal and (II) how such signal is used to determine the weight (which may be positive or negative) assigned to each immediate component;

(b)   the General Basket Strategy Base Description explains how the size of the exposure (represented by the number of units) of each component (which may be an immediate component or a constituent part of an immediate component) to which the GS Strategy is exposed is determined, and in turn, how the level of the GS Strategy is determined as a function of the levels and the number of units of each component included in the GS Strategy on any day;

(c)   the Specifications Annex provides specific details relevant to the GS Strategy which are utilised in the provisions of the Commodity Risk Premia Methodology Description and the General Basket Strategy Base Description, such as the immediate components included in the GS Strategy, the rebalancing dates and the dates on which the weight of each immediate component is determined;

(d)   the General Index Provisions provides information regarding risk factors, conflicts of interest, changes in methodology and disclaimers; and

(e)   the Risk Factors set out the specific risk factors relating to the GS Strategy.

The foregoing summary of documentation elements is not intended to be exhaustive. Please see such documentation elements for more information.

For information on the components of the GS Strategy, please refer to the relevant rules and/or documentation in respect of such components.

2.   Objective

The GS Strategy seeks to reflect a notional investment in a basket comprising 19 Goldman Sachs proprietary strategies (each called an "**immediate component**" of the GS Strategy), each of which is linked to a commodity futures contract. Each Goldman Sachs proprietary strategy is calculated in accordance with the methodology for calculating the relevant S&P GSCI single commodity sub-index to which such Goldman Sachs proprietary strategy is linked, but adjusted to modify the roll period used for the underlying commodity futures contracts. Each of these Goldman Sachs proprietary strategies also constitutes a "**terminal component**" of the GS Strategy.

The GS Strategy aims to generate overall positive returns by notionally entering into "long" positions (i.e., notionally buying positions) in immediate components that have a positive "signal" and notionally entering into "short" positions (i.e., notionally selling positions) in immediate components that have a negative "signal" by utilising a Goldman Sachs proprietary algorithm (called the "**commodity risk premia methodology**"), as more particularly described below in paragraph 3 (*The commodity risk premia methodology and calculation of the immediate component weights*).

The commodity risk premia methodology will first calculate three signals (each known as a "trend signal" and together the "trend signals") in respect of an immediate component by reference to the daily returns of such immediate component over a historical lookback period, with each trend signal assigning a different weight to more recent daily returns of such immediate component. This provides an indication of whether the performance of such immediate component is consistently positive or negative over such period. The "signal" generated for each immediate component will depend on whether the "trend signals" calculated for the historical lookback period are all negative, all positive or not in the same direction for such immediate component.

The size of the notional position that the GS Strategy will take in respect of each immediate component will be determined by reference to the "realised volatility" of a hypothetical index reflecting a notional investment in the same immediate components as the GS Strategy over a specified volatility lookback period immediately prior to each date on which the GS Strategy is rebalanced. The "volatility" of an asset is a measurement of the degree of change of fluctuation (which may be up or down) in the value, performance or investment return of such asset over a period of time, and does not imply the direction of the price or investment returns of such asset.

The GS Strategy will increase or reduce exposure to each immediate component depending on whether the realised volatility of such hypothetical index is higher or lower than the target level of volatility for the GS Strategy (this is called "**basket volatility targeting**"). The GS Strategy will (i) reduce its exposure to each immediate component if the hypothetical index has a higher realised volatility compared to the target level of volatility, or (ii) increase its exposure to each immediate component if the hypothetical index has a lower realised volatility compared to the target level of volatility, subject to a cap.

The rationale for the GS Strategy is that positive returns can be achieved by entering into "long" positions in immediate components that have a trend of delivering positive returns (and therefore have a positive "signal"), and entering into "short" positions in immediate components that have a trend of delivering negative returns (and therefore have a negative "signal"). By utilising three different exponentially weighted sum of daily returns in the calculation of the "signal", the GS Strategy aims to ensure that the size of the notional position that the GS Strategy will take in respect of an immediate component will be greater if such immediate component exhibits a consistent trend in delivering returns over the historical lookback period, or smaller if such immediate component has a less consistent trend in delivering returns over the historical lookback period. By targeting an overall volatility level for the GS Strategy aims to even out the level of risk over time, by reducing the exposure of the GS Strategy to immediate components during periods of high volatility and increasing the exposure to immediate components during periods of low volatility. Finally, subjecting each immediate component to a cap aims to ensure that the GS Strategy is not disproportionately exposed to the performance of any immediate component.

The value of the GS Strategy will increase if the value of a "long" position increases or the value of a "short" position decreases and vice-versa.

No assurance can be given that the commodity risk premia methodology or the assumptions underlying such methodology will be successful in achieving its objective or producing positive returns or that the GS Strategy will outperform any alternative investment strategy.

3.   The commodity risk premia methodology and calculation of the immediate component weights

The strategy sponsor will calculate the level of the GS Strategy on each business day on which the offices of Goldman Sachs & Co. LLC (an affiliate of the strategy sponsor) in New York City are open for business (these days are called "**strategy calculation days**"). The level of the GS Strategy will depend on the exposure of the GS Strategy to each immediate component.

In order to calculate the quantity of exposure to each immediate component (determined as a number of units called "**immediate units**"), the strategy sponsor will first have to determine the weight (called the "**immediate component weight**") of each immediate component included in the GS Strategy.

The strategy sponsor will determine the immediate units for each immediate component by reference to the immediate component weight and the levels of such immediate component and the GS Strategy observed on the strategy inception date, and thereafter, on the Monday of each week, or if such day is not a trading day, the immediately following trading day (each such day is called the "**reference date**"). The GS Strategy is rebalanced weekly on the trading day immediately following the relevant reference date (such day is called the "**rebalancing date**"), and the immediate component weight of each immediate component is calculated weekly on the same day as the reference date corresponding to such rebalancing date (this day is called a "**decision date**"), and will take effect on such weekly rebalancing date.

The immediate component weight of each immediate component included in the GS Strategy will be determined in accordance with the commodity risk premia methodology as follows:

(i)   Firstly, the strategy sponsor will determine the "**raw signal**" for each immediate component, each "**signal specification set**" (each being a set of inputs required to be able to calculate the raw signal) and a decision date (such day is also called the "**observation date**" in respect of such decision date). The raw signal in respect of an immediate component, each signal specification set and an observation date will be calculated as the exponentially weighted average of the daily returns of such immediate component over a specified lookback period for such observation date, on an annualised basis.

(ii)   Next, the strategy sponsor will determine a signal (called the "**individual signal**") in respect of each immediate component and each signal specification set equal to (a) one if the raw signal is greater than or equal to zero, or (b) minus one (-1) if the raw signal is less than zero.

(iii)   The strategy sponsor will then determine a final signal (called the "**signal**") in respect of each immediate component and a decision date as the sum of the weighted individual signals of such immediate component and each signal specification set.

(iv)   Thereafter, the strategy sponsor will determine a value called the "**preliminary weight**" for each immediate component for each such observation date by "mapping" the signal to the relevant preliminary weight specified in a "weight mapping table" in the Specifications Annex in the row corresponding to a particular range of values, such that the signal is both (I) strictly greater than the value specified in the column entitled "Lower Bound" in such row and (II) less than or equal to the value specified in the column entitled "Upper Bound" in such row.

(v)   Finally, the strategy sponsor will determine the immediate component weight in respect of each immediate component in accordance with paragraphs (a) and (b) below:

(a)   firstly, the strategy sponsor will adjust the preliminary weight of each immediate component (such adjusted preliminary weight, the "**weight output**") to be equal to the *product* of (I) its preliminary weight, and (II) the *quotient* of (A) the target level of volatility of the GS Strategy (called the "**basket volatility target**"), *divided* by (B) the realised volatility of a hypothetical index reflecting a notional investment in the same immediate components as the GS Strategy (with each such immediate component being assigned a weight equal to the preliminary weight calculated in accordance with paragraph (iv) above) over a specified volatility lookback period ending on the decision date; and

(b)   finally, the strategy sponsor will apply the immediate component weight cap to the weight output of each immediate component, such that the immediate component weight of such immediate component will be equal to the *product* of (I) its weight output, and (II) the lesser of (A) one, and (B) the lowest value calculated across all immediate components by *dividing* (x) the immediate component weight cap of an immediate component by (y) the absolute value of such immediate component's weight output.

4.   Exposure of the GS Strategy to a terminal component

The GS Strategy provides exposure to each terminal component included in it (either as an immediate component or as a constituent part of an immediate component) by notionally entering into a position (which may be "long" or "short") in such terminal component. The exposure of the GS Strategy to each terminal component on each strategy calculation day (see paragraph 5 (*Calculation and publication of the strategy tradable level and strategy timely level of the GS Strategy*) below) is determined as follows:

(i)   Firstly, the strategy sponsor will determine the immediate units of exposure of the GS Strategy to each immediate component as the sum of the exposure to such immediate component over each rebalancing

date falling on or prior to such strategy calculation day, being in respect of each rebalancing date (such day, the "**relevant rebalancing date**"), the *product* of (a) its immediate component weight as of the relevant rebalancing date, *multiplied* by (b) the *quotient* of (I) the level of the GS Strategy on the reference date in respect of the relevant rebalancing date, *divided* by (II) the level of such immediate component on such reference date, *multiplied* by (c) the *quotient* of (I) the number of fade-in days in respect of the relevant rebalancing date falling on or prior to such strategy calculation day *minus* the number of fade-out days in respect of the relevant rebalancing date falling on or prior to such strategy calculation day, *divided* by (II) the total number of fade-in days. In respect of any strategy calculation day and the relevant rebalancing date, if the final fade-out day in respect of the relevant rebalancing date falls on or prior to such strategy calculation day, the exposure of the GS Strategy to each immediate component in respect of the relevant rebalancing date on such strategy calculation day shall be zero.

(ii)   Therefore, the exposure of the GS Strategy to each immediate component on the last fade-in day in respect of the relevant rebalancing date, if expressed as a percentage of the level of the GS Strategy, will be approximately equal to the immediate component weight of such immediate component as of the relevant rebalancing date.

(iii)   The strategy sponsor will then determine the exposure of the GS Strategy to each terminal component as a quantity (called "**units**") equal to the aggregate of the exposure to such terminal component due to the exposure of each immediate component included in the GS Strategy to such terminal component. The exposure of the GS Strategy to a terminal component (for the purposes of this paragraph, the "**relevant terminal component**") due to the exposure of an immediate component (for the purposes of this paragraph, the "**relevant immediate component**") to the relevant terminal component is equal to the *product* of (a) the immediate units of the relevant immediate component, *multiplied* by (b) the units of the relevant terminal component included in the relevant immediate component, being (I) if the relevant immediate component is the relevant terminal component, one, (II) if the relevant terminal component is a constituent part of the relevant immediate component, the units of the relevant terminal component included in the relevant immediate component, as determined in accordance with the relevant rules of the relevant immediate component, or (III) otherwise, zero.

5.   Calculation and publication of the strategy tradable level and strategy timely level of the GS Strategy

The strategy sponsor will calculate the level (called the "**strategy tradable level**") of the GS Strategy on each strategy calculation day, subject to adjustment for non-tradable events and adjustment events (see paragraph 6 (*Non-tradable events, market disruption events, adjustment events and consequences*) below).

The strategy tradable level of the GS Strategy on each strategy calculation day will be equal to (i) the strategy tradable level on the immediately preceding strategy calculation day, *plus* (ii) the aggregate of the daily mark-to-market change in value of the position in each terminal component included in the GS Strategy, *minus* (iii) the aggregate of the transaction costs associated with any changes in the positions of the terminal components included in the GS Strategy, *minus* (iv) the aggregate of the servicing costs in respect of the holding of the positions of the terminal components included in the GS Strategy, *minus* (v) the strategy servicing costs. The strategy tradable level of the GS Strategy will be floored at zero.

It should be noted that the transaction costs and the servicing costs associated with a terminal component will be calculated by reference to the transaction cost rates and the servicing cost rates respectively, as set out in the Strategy Rules. Unless the transaction cost rate and the servicing cost rate for each terminal component are specified to be zero, the transaction costs and the servicing costs will generally have the effect of reducing the level of the GS Strategy. The strategy servicing costs associated with the GS Strategy will be calculated by reference to the strategy servicing cost rate, as set out in the strategy rules. Unless the strategy servicing cost rate is specified to be zero, the strategy servicing costs will generally have the effect of reducing the level of the GS Strategy.

The transaction costs and the servicing costs are calculated by reference to pre-determined rates and do not necessarily reflect the actual transaction costs and servicing costs that would be incurred by an investor replicating the exposure to the terminal components by trading in such terminal components, which could be larger or smaller from time to time. The issuer of any financial product linked to the GS Strategy (or its affiliates) may benefit if the notional transaction costs or servicing costs embedded in the GS Strategy exceed the actual transaction costs or servicing costs that may be incurred by the issuer of such products (or its affiliates) in hedging transactions that may be entered into in respect of such financial products.

The value of the position in a terminal component on a strategy calculation day is equal to the *product* of (i) the relevant number of units of such terminal component included in the GS Strategy, and (ii) the tradable level of such terminal component on such strategy calculation day. The tradable level of a terminal component in respect of a strategy calculation day is (a) if no non-tradable event occurs on such strategy calculation day, the official closing level of such component as published by the relevant strategy sponsor, or (b) if a non-tradable event

occurs on such strategy calculation day, the level of the component as determined in accordance with paragraph 6 (*Non-tradable events, market disruption events, adjustment events and consequences*) below. The transaction costs for any component for which the position in such component in the GS Strategy is unchanged on such strategy calculation day will be equal to zero. The servicing costs for any component to which the GS Strategy has zero exposure on such strategy calculation day will be equal to zero.

The strategy sponsor will also calculate a level (called the "**strategy timely level**") of the GS Strategy in respect of each strategy calculation day. If no non-tradable event occurs in respect of any component on a strategy calculation day, the strategy timely level will be equal to the strategy tradable level on such strategy calculation day. If a non-tradable event occurs in respect of a component on a strategy calculation day, the strategy sponsor will calculate the strategy timely level of the GS Strategy using the same methodology for calculating the strategy tradable level, but using the official closing level of each component in place of its tradable level.

The strategy timely level of the GS Strategy for each strategy calculation day will be published on Bloomberg ticker ABGSD012 <Index>. The strategy sponsor does not have any obligation to continue to publish, and can discontinue publication of, the GS Strategy at any time.

6. Non-tradable events, market disruption events, adjustment events and consequences

(i)   Non-tradable events

A non-tradable event occurs in respect of a component when a strategy calculation day is not a trading day for such component or a market disruption event occurs in respect of the relevant contract expiration (called the "**affected contract expiration**") or any other asset, instrument or rate (including, but not limited to, an option, exchange rate or interest rate) included in such component (or a terminal component included in such component) or used in the calculation of the level of such component (or a terminal component included in such component). If such component is a terminal component and one or more components are specified to be a "MDE linked component" in respect of such component, a non-tradable event will also occur in respect of such component if a market disruption event occurs in respect of one or more such MDE linked components on such strategy calculation day.

A market disruption event occurs in respect of a contract expiration when (i) the price of such contract expiration has hit the daily upper or lower limit imposed by the relevant trading facility, (ii) the price for such contract expiration is not announced or published, or (iii) there is a suspension of trading of such contract expiration.

A "trading day" for a component that is a terminal component is a day which is (a) an exchange business day for the relevant version of any underlying commodity futures contract (called a "**contract expiration**") included in such component, (b) a day on which any other asset, instrument or rate (including, but not limited to, an option, exchange rate or interest rate) included in such component or used in the calculation of the level of such component is scheduled to be traded or published, as applicable, and (c) a day on which such component is scheduled to be published. A "trading day" for a component that is not a terminal component is a day which is a trading day for all the terminal components included in such component, and a day on which such component is scheduled to be published.

If a non-tradable event occurs on a strategy calculation day in respect of a component, the strategy sponsor will calculate the strategy tradable level of the GS Strategy using the tradable level of such component, which will be calculated by the strategy sponsor in accordance with the rules of the relevant component, or if not so specified in the relevant rules and no "MDE linked component" is specified in respect of such component, by following the formula for, and method of, calculating such component, using the price of the affected contract expiration on the next following strategy calculation day on which a non-tradable event does not exist. However, if a non-tradable event persists on each of the five strategy calculation days immediately following that strategy calculation day, then the strategy sponsor will determine the price for that affected contract expiration in a commercially reasonable manner. If one or more MDE linked components are specified in respect of such component and a non-tradable event occurs in respect of such component on a strategy calculation day, the tradable level of such component will be equal to the timely level of such component on the next following strategy calculation day on which a non-tradable event does not exist.

(ii)   Adjustment events

If a component is replaced by a successor index or strategy which is substantially similar or calculated in the same or a substantially similar manner, then such replacement index or strategy shall be deemed to be that component, and the strategy sponsor may make adjustments to the Strategy Rules as it determines to be necessary.

If (a) the relevant sponsor for a component makes a material change to the weighting or composition of, formula for, or method of calculating such component, or (b) fails to calculate the level of such component or such

component has ceased to be calculated by the relevant sponsor, or (c) the strategy sponsor determines that the level of the component contains a manifest error, then the strategy sponsor will calculate the level of such component using the same formula for, and method of calculating the level of such component last in effect, or if it determines that any of the foregoing events could adversely affect the GS Strategy, it may elect to remove or replace such component from the GS Strategy and may make such adjustments to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary.

If any contract expiration included in a component (a) has ceased to be published by the relevant trading facility and has not been replaced by a successor, or (b) the strategy sponsor determines that there has been a material change in the content, composition or constitution of the relevant commodity futures contract and the commodity referenced by such commodity futures contract, or the formula for or method of calculating such contract expiration or the relevant commodity futures contract, or the terms of such contract expiration or the relevant commodity futures contract, or (c) has ceased (or will cease) to be a liquid, actively traded contract expiration that is generally available for trading, or has been the subject of a market disruption event for at least five consecutive strategy calculation days, or (d) will be terminated or delisted, then the strategy sponsor may elect to remove or replace the component linked to such contract expiration from the GS Strategy and may make such adjustments to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary.

If (a) any third party information or data used to determine any weight(s), signal(s) or other input used in the calculation of the GS Strategy ceases to be published, or (b) there is a material change to the formula for or method of calculating, or the content or frequency of publication of such third party information or data, or (c) such third party information or data is not published for an extended period of time, then the strategy sponsor may (I) elect to remove or replace or assign a zero weight to the component(s) affected by such event from the GS Strategy, or (II) use comparable information or data from an alternative data source, or (III) make such adjustments to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary, or (IV) if the strategy sponsor determines that none of the above adjustment(s) would achieve a commercially reasonable result and/or that it is no longer possible or practicable to calculate the GS Strategy, terminate the GS Strategy without notice.

7.   Determinations and calculations

Unless otherwise specified, the strategy sponsor will make all determinations and calculations, in its discretion and acting in a commercially reasonable manner, by reference to such factors as it deems appropriate, and such determinations and calculations will (in the absence of manifest error) be final, conclusive and binding. The strategy sponsor shall not have any responsibility to any person for any errors or omissions in any determination or calculation or owe any fiduciary duties to any person.

8.   Overview of conflicts of interest

Goldman Sachs has multiple roles in connection with the GS Strategy, which include (i) calculating and publishing the strategy timely level and making certain determinations, and (ii) engaging in a range of activities in its business as a full service financial services group which could affect the value of the GS Strategy or a component included in the GS Strategy. In such capacities, it has the power to make determinations that could materially affect the value of the GS Strategy.

The information set out in the preceding sections is only a high-level summary of the key features, and conflicts of interest of the GS Strategy, and is intended to give, and will only give, an investor a basic understanding of how the GS Strategy works.

BEFORE INVESTORS INVEST IN ANY PRODUCT LINKED TO THE GS STRATEGY, THEY MUST READ THE STRATEGY RULES SETTING OUT THE COMPLETE METHODOLOGY, ADJUSTMENTS AND CONFLICTS OF INTEREST APPLICABLE TO THE GS STRATEGY, COPIES OF WHICH WILL BE PROVIDED ON REQUEST BY ANY INVESTOR IN ANY FINANCIAL PRODUCT LINKED TO THE GS STRATEGY. IN PARTICULAR, AN INVESTOR MUST PAY PARTICULAR ATTENTION TO THE CONFLICTS OF INTEREST APPLICABLE TO THE GS STRATEGY SET OUT IN THE STRATEGY RULES.

Specifications Annex – Goldman Sachs Commodity Trend Strategy D012

Dated: 9 September 2020

1.   Introduction

This Specifications Annex, as may be amended from time to time constitutes the Relevant Specifications Annex for the purposes of the Goldman Sachs Commodity Risk Premia Methodology Description (the "**Commodity Risk Premia Methodology Description**"), and utilises the methodology set out therein to calculate the level of the GS Strategy identified in paragraph 2 (*Strategy Specifications*) below. This Specifications Annex sets out certain specifications relating to the Immediate Components and any other information applicable to the GS Strategy.

This Specifications Annex should be read in conjunction with the Commodity Risk Premia Methodology Description (and the other documentation elements referred to therein), which comprises certain rules, methodology, definitions, disclaimers, conflicts of interest and other information applicable to the GS Strategy.

Terms not otherwise defined in this Specifications Annex shall have the meanings given to them in the Commodity Risk Premia Methodology Description.

2.   Strategy Specifications

Strategy Name:	Goldman Sachs Commodity Trend Strategy D012
Strategy Inception Date:	20 January 1998 Investors should refer to the risk factor in the General Index Provisions, entitled "*Index Inception Date and Back-testing*".
Publication of Strategy Timely Level and/or Strategy Tradable Level:	Strategy Timely Level
Strategy Publication Data Source:	Bloomberg Ticker: ABGSD012 <Index>
Initial Strategy Level:	100
Strategy Calculation Currency:	USD
Strategy Calculation Day:	Any day on which the offices of Goldman Sachs & Co. LLC in New York are open for business
Reference Date:	Each of (i) the Strategy Inception Date, and thereafter, (ii) the Monday of each week, or if such day is not a Trading Day for the GS Strategy, the next following Trading Day
Rebalancing Date:	In respect of a Reference Date, the Trading Day immediately following such Reference Date
Decision Date Rule:	In respect of a Reference Date, the same day as such Reference Date
Disjoint Execution:	Not Applicable
Number of Fading Days:	10
Strategy Servicing Cost Rate:	0%
Strategy Floored at Zero:	Applicable

3. Methodology Specifications

I. Determination of the Signal	
I.1 Signal Combination:	Applicable
<u>Signal Adjust Method</u>:	Weighted Average
<u>Signal Weights</u>	

Signal Specification Set	*Signal Weight*
Signal Specification Set 1	1/3
Signal Specification Set 2	1/3
Signal Specification Set 3	1/3

I.2 Determination of the Individual and Raw Signals	
<u>Signal Specification Set 1</u>	
Signal Style:	Exponential Trend
Exponential Smoothing Factor:	0.01045
Performance Lookback Rule:	In respect of an Observation Date, the 510th Strategy Calculation Day falling prior to such Observation Date
Use Signal Sign:	Applicable
<u>Signal Specification Set 2</u>	
Signal Style:	Exponential Trend
Exponential Smoothing Factor:	0.00520
Performance Lookback Rule:	In respect of an Observation Date, the 510th Strategy Calculation Day falling prior to such Observation Date
Use Signal Sign:	Applicable
<u>Signal Specification Set 3</u>	
Signal Style:	Exponential Trend
Exponential Smoothing Factor:	0.00270
Performance Lookback Rule:	In respect of an Observation Date, the 510th Strategy Calculation Day falling prior to such Observation Date
Use Signal Sign:	Applicable

II. Preliminary Weight Determination Process	
II.1 Base Weight Method:	Timeseries
<u>Target Weights</u>:	Not Applicable
<u>Normalize Weights</u>:	Not Applicable

II.2 Volatility Targeting:		Not Applicable	
II.3 Weight Mapping:		Applicable	
<u>Weight Mapping Table</u>			
Row	<u>Lower bound</u>	<u>Upper Bound</u>	<u>Weight Mapping Value</u>
1	-2	-0.9	-7%
2	-0.9	0	-4.64%
3	0	0.9	4.64%
4	0.9	2	7%
II.4 Weight Adjusting:		Not Applicable	

III. Immediate Component Weight Determination Process	
III.1 Number of Observation Dates:	1
III.2 Basket Volatility Targeting:	Applicable
<u>Basket Volatility Target</u>:	10 per cent.
<u>Annualization Factor</u>:	252
<u>Basket Volatility Targeting Lookback Rule</u>:	In respect of a Decision Date, the Strategy Calculation Day falling 12 months prior to such Decision Date, or if such day is not a Strategy Calculation Day, the immediately preceding day that is a Strategy Calculation Day
<u>Exponential Volatility Targeting</u>:	Not Applicable
III.3 Weight Capping:	Applicable
<u>Weight Capping Style</u>:	Proportional
<u>Immediate Component Weight Cap</u>:	In respect of each Immediate Component, 16 per cent.
III.4 Weight Rounding:	Applicable
<u>Weight Rounding Increment</u>:	0.001

4. **Immediate Components and Terminal Components**

The Immediate Components of the GS Strategy (each of which also constitutes a Terminal Component of the GS Strategy) are as set out in the table (*Immediate Components (and Terminal Components)*) below.

The Sponsor in respect of each Immediate Component (which is also a Terminal Component) is Goldman Sachs International. For information on each such Immediate Component (which is also a Terminal Component), please refer to the relevant rules and/or documentation in respect of such Immediate Component.

Table – Immediate Components (and Terminal Components)

Immediate Component	**Component Ticker**	**Transaction Cost Rate (in**	**Servicing Cost Rate (in basis**	**Terminal Component ("T") or Non-Terminal**	**Style**

		basis points)	points)	Component ("NT")	
Enhanced Strategy CNE205 on S&P GSCI® Corn Excess Return Index	AGGSCN05 <Index>	2	18	T	A
Goldman Sachs Enhanced Strategy CCE205 on S&P GSCI® Cocoa Excess Return Index	AGGSCC05 <Index>	2	20	T	A
Enhanced Strategy GDE205 on S&P GSCI® Gold Excess Return Index	AGGSGD05 <Index>	1	12	T	A
Enhanced Strategy IAE205 on S&P GSCI® Aluminium Excess Return Index	AGGSIA05 <Index>	1	10	T	A
Enhanced Strategy ICE205 on S&P GSCI® Copper Excess Return Index	AGGSIC05 <Index>	1	10	T	A
Enhanced Strategy IKE205 on S&P GSCI® Nickel Excess Return Index	AGGSIK05 <Index>	2	10	T	A
Enhanced Strategy IZE205 on S&P GSCI® Zinc Excess Return Index	AGGSIZ05 <Index>	1	10	T	A
Enhanced Strategy KCE205 on S&P GSCI® Coffee Excess Return Index	AGGSKC05 <Index>	2	24	T	A
Enhanced Strategy NGE205 on S&P GSCI® Nat Gas Excess Return Index	AGGSNG05 <Index>	1	10	T	A
Enhanced Strategy SOE205 on S&P GSCI® Soybeans Excess Return Index	AGGSSO05 <Index>	2	18	T	A
Enhanced Strategy SBE205 on S&P GSCI® Sugar Excess Return Index	AGGSSB05 <Index>	2	18	T	A
Enhanced Strategy SIE205 on S&P GSCI® Silver Excess Return Index	AGGSSI05 <Index>	2	14	T	A
Enhanced Strategy GOE205 on S&P GSCI® Gasoil Excess Return Index	AGGSGO05 <Index>	3	14	T	A
Enhanced Strategy HUE205 on S&P GSCI® Gasoline Excess Return Index	AGGSHU05 <Index>	2	12	T	A
Enhanced Strategy WHE205 on S&P GSCI® Wheat Excess Return	AGGSWH05 <Index>	2	20	T	A

Index					
Enhanced Strategy HOE205 on S&P GSCI® Heating Oil Excess Return Index	AGGSHO05 <Index>	2	12	T	A
Enhanced Strategy CTE205 on S&P GSCI® Cotton Excess Return Index	AGGSCT05 <Index>	3	25	T	A
Goldman Sachs Commodity Strategy 1133	ABGS1133 <Index>	1	9	T	B
Enhanced Strategy BCE205 on S&P GSCI® Brent Crude Oil Excess Return Index	AGGSBC05 <Index>	1	9	T	A

RISK FACTORS – GOLDMAN SACHS COMMODITY TREND STRATEGY D012

(Risk factors applicable to the Goldman Sachs Commodity Trend Strategy D012)

Version 1.0

Dated: 9 September 2020

*The following list of risk factors does not purport to be a complete list or explanation of all the risks associated with the Goldman Sachs Commodity Trend Strategy D012 (the "**GS Strategy**"). Risk factors in relation to a transaction or product which is linked to the performance of the GS Strategy may also be set out in the relevant documents in respect of such transaction or product. Terms not otherwise defined in this section in respect of the GS Strategy shall have the meanings given to them in the Strategy Rules.*

References in these risk factors to "GS Strategy" shall mean the Goldman Sachs Commodity Trend Strategy D012.

There is no assurance that the GS Strategy will achieve its objective

The GS Strategy aims to generate overall positive returns by notionally entering into "long" positions (i.e., notionally buying positions) in immediate components that have a positive "signal" and notionally entering into "short" positions (i.e., notionally selling positions) in immediate components that have a negative "signal" by utilising a Goldman Sachs proprietary algorithm (called the "**Commodity Risk Premia Methodology**").

The "signal" is calculated by reference to the daily returns of the relevant immediate component over a pre-determined historical lookback period. Whether the GS Strategy notionally enters into a "long" position or notionally enters into a "short" position in an immediate component will be determined by reference to whether the daily returns over such historical period have been consistently positive (and therefore such immediate component has a positive "signal") or consistently negative (and therefore such immediate component has a negative "signal").

The size of the notional position that the GS Strategy will enter into in respect of each immediate component will be (i) dependent on how consistent the trend in the daily returns of such immediate component is in the historical lookback period and (ii) inversely proportional (subject to a cap) to the "realised volatility" of a hypothetical index reflecting a notional investment in the same immediate components as the GS Strategy over the specified volatility lookback period immediately prior to each date on which the GS Strategy is rebalanced.

The rationale for the GS Strategy is that positive returns can be achieved by entering into "long" positions in immediate components that have a trend of delivering consistently positive returns (and therefore have a positive "signal"), and entering into "short" positions in immediate components that have a trend of delivering consistently negative returns (and therefore have a negative "signal"). The GS Strategy aims to ensure that the size of the notional position that the GS Strategy will take in respect of an immediate component will be greater if such immediate component exhibits a more consistent trend in delivering returns over the historical lookback period, or smaller if such immediate component exhibits a less consistent trend in delivering returns over the historical lookback period. By targeting an overall volatility level, the GS Strategy aims to even out the level of risk over time, by reducing the exposure of the GS Strategy to immediate components during periods of high volatility and increasing the exposure to immediate components during periods of low volatility. Finally, subjecting each immediate component to a cap aims to ensure that the GS Strategy is not disproportionately exposed to the performance of any immediate component.

However, there can be no assurance that the Commodity Risk Premia Methodology will successfully identify the appropriate type or size of position to be taken in its immediate components for any relevant day and this may adversely affect the value of the GS Strategy.

The negative performance of one or more immediate components in the GS Strategy may outweigh the positive performance of other immediate components in the GS Strategy

The value of the GS Strategy will go up or down depending on the overall performance of each of the immediate components in the GS Strategy. The negative performance contribution of one or more immediate components in the GS Strategy may outweigh the positive performance contribution of other immediate components in the GS Strategy. Even in the case of a positive performance contribution of one or more immediate components in the GS Strategy, the value of the GS Strategy as a whole may go down if the performance contribution of the other immediate components is negative to a greater extent.

Gains from an investment in financial instruments linked to the GS Strategy will be reduced by the deduction of embedded costs

Nominal embedded costs are included within the GS Strategy and will reduce the level of the GS Strategy. Notional costs are deducted from the performance of the GS Strategy to reflect (i) the rebalancing of the terminal components (called "**transaction costs**") and (ii) maintaining exposure to the terminal components ("**servicing costs**"). The relevant transaction cost rate and the relevant servicing cost rate for each terminal component will vary depending on the commodity to which such terminal component is linked. The transaction cost associated with the rebalancing of any terminal component is the product of the transaction cost rate for such terminal component and the number of units of such terminal component to be rebalanced. Transaction costs are only incurred at the time a rebalancing of the GS Strategy occurs. The servicing costs associated with maintaining the exposure to any terminal component is the product of the servicing cost rate for such terminal component and the number of units of such terminal component. Servicing costs are incurred on an ongoing basis as long as the GS Strategy maintains exposure to a terminal component. These embedded costs will reduce the level of the GS Strategy.

Notional transaction costs and servicing costs embedded in the GS Strategy may be greater than actual transaction costs and servicing costs incurred in hedging transactions of the Strategy Sponsor or its affiliates

The transaction costs and servicing costs reflected in the calculation of the GS Strategy and the immediate components included in the GS Strategy are calculated by reference to pre-determined rates and do not necessarily reflect the actual or realised transaction costs and servicing costs that would be incurred by an investor in the relevant commodity futures contracts underlying each terminal component, which could be larger or smaller from time to time. The Strategy Sponsor (or its affiliates) may benefit if the notional transaction costs embedded in the GS Strategy exceed the actual transaction costs that may be incurred by the Strategy Sponsor (or its affiliates) in hedging transactions that may be entered into in respect of the GS Strategy.

The GS Strategy does not track the performance of the S&P GSCI® and is likely to deliver returns that differ from the performance of the S&P GSCI®

An investment in a financial instrument linked to the value of the GS Strategy is not comparable to and should not be benchmarked against an investment in a financial instrument linked to the value of the S&P GSCI®. This is because the differences between the GS Strategy and the S&P GSCI® are likely to produce different values for the GS Strategy and the S&P GSCI® at any given time and, therefore, may produce differing returns.

No assurance can be given that the methodology underlying the GS Strategy will be successful in producing positive returns or that the GS Strategy will outperform any other alternative investment strategy

Furthermore, it should be noted that the results that may be obtained from investing in any financial instrument linked to the GS Strategy or otherwise participating in any transaction linked to the GS Strategy may well be significantly different from the results that could theoretically be obtained from a direct investment in the relevant components, the underlying commodity futures contracts or any related derivatives thereto.

The level of the GS Strategy may be zero

The level of the GS Strategy is floored at zero. If the methodology for calculating the level of the GS Strategy would otherwise result in the level of the GS Strategy on any strategy calculation day of less than zero, the level of the GS Strategy shall be deemed to be zero on such strategy calculation day and all subsequent strategy calculation days thereafter.

The GS Strategy has a limited operating history and may perform in unanticipated ways

As the GS Strategy is a relatively new strategy and limited historical performance data exists with respect to the GS Strategy, an investment linked to returns generated by the GS Strategy may involve greater risk than an investment linked to returns generated by an investment strategy with a proven track record. A longer history of actual performance could provide more reliable information on which to assess the validity of the GS Strategy and on which to base an investment decision, and the fact that the GS Strategy is relatively new means that its history of actual performance is relatively short. There can be no guarantee or assurance that the GS Strategy will operate in a manner consistent with the data available.

Strategy Inception Date and Back-testing

The Strategy Sponsor will designate the "Strategy Inception Date", on which the value of the GS Strategy is equal to the "Initial Strategy Level" as specified in the rules of the GS Strategy. The levels of the GS Strategy in the period from such Strategy Inception Date, to a date (the "**Strategy Launch Date**") no later than the date on which investment products linked to the GS Strategy are first implemented (which may be materially later than the Strategy Inception Date) will be calculated on the basis of back-tested data ("**Back-testing**").

GS Strategy levels for such period are hypothetical, and are calculated at or around the Strategy Launch Date in accordance with the GS Strategy methodology but using historical data available to the Strategy Sponsor at the time of calculation. If such historical data is not available or is incomplete for any particular day, the Strategy Sponsor may use alternate sources of data in place of such historical data, and/or may substitute alternative values (which may be determined by the Strategy Sponsor), as it deems necessary to calculate such hypothetical level of the GS Strategy.

If such historical data was available or complete, or if different sources or values were used in such Back-testing, the GS Strategy levels for such period would be different, potentially materially so. Accordingly, the GS Strategy levels may not reflect the performance of, and are no guarantee or assurance in respect of the performance or returns of, the GS Strategy over any time period from the Strategy Launch Date. Furthermore, any Back-testing is based on information and data provided to the Strategy Sponsor by third parties. The Strategy Sponsor will not have independently verified or guaranteed the accuracy and/or the completeness of such information or data provided and is not responsible for any inaccuracy, omission, mistake or error in such information, data and/or Back-testing.

The GS Strategy is not actively managed

The GS Strategy seeks to generate returns in accordance with the relevant investment objective (as described above in the risk factor entitled "*There is no assurance that the GS Strategy will achieve its objective*"). The immediate component weight assigned to each immediate component included in the GS Strategy is determined in accordance with the relevant strategy methodology for the GS Strategy. Therefore, there will be no active management of the GS Strategy so as to enhance returns beyond those embedded in the GS Strategy. Market participants often adjust their investments promptly in view of market, political, financial or other factors. An actively managed investment may potentially respond more directly and appropriately to immediate market, political, financial or other factors than a non-actively managed strategy such as the GS Strategy. No assurance can be given that the GS Strategy will replicate or outperform a comparable strategy which is actively managed and the return on the GS Strategy may be lower than the return on an actively managed strategy.

The GS Strategy is not a fully diversified portfolio

Diversification is generally considered to reduce the amount of risk associated with generating returns. Although the terminal components included in the GS Strategy are linked to a number of different commodities, the exposure of the GS Strategy may be concentrated in certain commodity sectors. There can be no assurance that the GS Strategy will be sufficiently diversified at any time to reduce or minimize risks of volatility. The more concentrated the GS Strategy is in certain commodity sectors, the greater degree of volatility the GS Strategy may exhibit, and this could in turn result in an adverse effect on the returns of the GS Strategy.

In addition, commodities from certain sectors may suffer the same adverse performance following a general downturn or other economic or political event, and this could in turn have an adverse effect on the returns of the GS Strategy.

Past performance of the GS Strategy is no guide to future performance

The actual performance of the GS Strategy over the life of any financial instrument linked to the GS Strategy as

well as the amount payable at maturity or on settlement may bear little relation to the historical levels of the GS Strategy. It is not possible to predict the future performance of the GS Strategy.

Historical analysis or other statistical analysis in respect of the GS Strategy is no guarantee of the performance of the GS Strategy

Certain presentations and historical analysis or other statistical analysis materials in respect of the operation and/or potential returns of the GS Strategy which may be provided are based on simulated analyses and hypothetical circumstances to estimate how the GS Strategy may have performed prior to its launch date. Neither the Strategy Sponsor nor the issuer of any financial instrument linked to the GS Strategy provides any assurance or guarantee that the GS Strategy will operate or would have operated in the past in a manner consistent with those materials. As such, any historical returns projected in such materials or any hypothetical simulations based on these analyses or hypothetical levels, which are provided in relation to the GS Strategy, may not reflect the performance of, and are no guarantee or assurance in respect of the performance or returns of, the GS Strategy over any time period.

No assurance can be given that the GS Strategy will produce "absolute returns"

Alternative investments such as financial instruments linked to the GS Strategy may often be purchased on the basis of their potential to produce "absolute returns", or returns independent of the overall direction of the relevant markets. However, there can be no assurance that the GS Strategy will actually be successful at producing consistently positive returns or returns independent of the overall direction of the relevant markets, nor does the Strategy Sponsor or the issuer of financial instruments linked to the GS Strategy make any representation or warranty, express or implied, that the GS Strategy will do so in the future.

The holder of any financial instrument linked to the GS Strategy will have no rights with respect to commodity futures contracts referenced by the GS Strategy or any underlying or rights to receive any commodity futures contracts or other underlying

Investing in any financial instrument linked to the GS Strategy will not make the investor a holder of any commodity futures contracts referenced by any S&P GSCI® single commodity sub-indices (each a "**S&P GSCI® Single Commodity Sub-Index**" and together, the "**S&P GSCI® Single Commodity Sub-Indices**") and/or Goldman Sachs proprietary strategies on single commodity sub-indices (as the case may be) included in the GS Strategy (whether directly or indirectly via its immediate components) or any commodity underlying of such commodity futures contracts. The holder or owner of any financial instrument linked to the GS Strategy will not have any rights with respect to any commodity futures contracts or the relevant commodity underlying. Any amounts payable on any financial instrument linked to the GS Strategy will be made in cash, and the holder or owner of any financial instrument linked to the GS Strategy will have no right to receive any commodity futures contracts referenced by the GS Strategy or any commodity underlying such commodity futures contracts.

The policies of the Strategy Sponsor and changes that affect the GS Strategy could affect the value of the GS Strategy

The policies of the Strategy Sponsor concerning the calculation of the GS Strategy could affect the value of the GS Strategy and, therefore, the amount payable on any financial instruments linked to the GS Strategy on the stated maturity date of such financial instruments and the market value of such financial instruments before that date. The amount payable on any financial instruments linked to the GS Strategy and their market value could also be affected if the Strategy Sponsor changes these policies, for example, by changing the manner in which it calculates the GS Strategy, or if the Strategy Sponsor discontinues or suspends calculation or publication of the GS Strategy, in which case it may become difficult to determine the market value of such financial instruments. If such policy changes relating to the GS Strategy or the calculation or publication of the GS Strategy is discontinued or suspended, the calculation agent of any financial instrument linked to the GS Strategy (which may be Goldman Sachs International) may have discretion in determining the level of the GS Strategy on the relevant determination date and the amount payable on such financial instruments.

The Strategy Sponsor has the discretion to make determinations that could materially affect the GS Strategy and create conflicts of interest

The Strategy Sponsor does not generally exercise any discretion and owes no fiduciary duties in respect of the GS Strategy or any financial instrument linked to the GS Strategy. However, the Strategy Sponsor has a certain

amount of discretion in the event of, amongst other things, the occurrence of certain non-tradable events (including market disruption events) or adjustment events in respect of the GS Strategy (each as more particularly described in the relevant Strategy Rules).

Determinations made by the Strategy Sponsor could adversely affect the level of the GS Strategy or any financial instrument linked to the GS Strategy and the exercise by the Strategy Sponsor of its discretion could present it with a conflict of interest of the kind described in the section entitled "Conflicts of Interest" in the relevant Strategy Rules. In making those determinations, the Strategy Sponsor will not be required to, and will not, take the interests of any investor in any such financial instrument linked to the GS Strategy into account or consider the effect its determinations will have on the value of such financial instrument. All determinations made by the Strategy Sponsor shall be at its sole discretion and shall be conclusive for all purposes and will bind all holders of any financial instrument linked to the GS Strategy. The Strategy Sponsor shall not have any liability for such determinations.

Data sourcing and calculation risks associated with the GS Strategy and its terminal components may adversely affect the level of the GS Strategy

The GS Strategy may be linked, either directly or indirectly via its immediate components, to S&P GSCI® Single Commodity Sub-Indices and/or Goldman Sachs proprietary strategies on single commodity sub-indices (as the case may be), each of which is linked to exchange-traded futures contracts on commodities, and therefore calculated based on price data that may be subject to potential errors in data sources or other errors that may affect the closing levels and/or prices published by the relevant sponsor (and therefore the level of the GS Strategy). Additionally, any errors in the third party information or data that the GS Strategy relies on to generate the signal may impact the other calculations underlying the GS Strategy methodology, such as whether the GS Strategy takes a long or short position in an immediate component included in the GS Strategy. Such errors could adversely affect the level of the GS Strategy. Neither the Strategy Sponsor, nor any of its affiliates is under any obligation or currently intends to independently verify such third party information or data from any third party data source or to advise any investor in any financial instrument linked to the GS Strategy of any inaccuracy, omission, mistake or error of which it or any such affiliate becomes aware. Consequently, neither the Strategy Sponsor nor any of its affiliates shall be liable (whether in contract, tort or otherwise) to any person for any inaccuracy, omission, mistake or error in the calculation or dissemination of the level of the GS Strategy. There can be no assurance that any error or discrepancy on the part of any data source or sponsor will be corrected or revised. Even if any error or discrepancy on the part of any third party data source or sponsor is corrected or revised, neither the Strategy Sponsor nor any of its affiliates is under any obligation or currently intends to incorporate any such correction or revision into the calculation of the level of the GS Strategy or the level of any terminal component. Neither the Strategy Sponsor, or any of its affiliates makes any representation or warranty, express or implied, as to the correctness or completeness of that information and takes no responsibility for the accuracy of such data or the impact of any inaccuracy of such data on the level of the GS Strategy, the level of any terminal component or on the performance of the commodity futures contracts referenced therein. Any of the foregoing errors or discrepancies could also adversely affect the level of the GS Strategy or its terminal components.

The GS Strategy may be subject to non-tradable events

If a non-tradable event (which includes the occurrence of a market disruption event) occurs or is continuing in respect of a Component on any strategy calculation day on which the level of the GS Strategy is scheduled to be calculated by the Strategy Sponsor, the Strategy Sponsor will calculate the Strategy Tradable Level of the GS Strategy using the Tradable Level of such Component. In such case, it is likely that the Strategy Tradable Level of the GS Strategy will be different from what it would have been if such non-tradable event had not occurred, and it may vary unpredictably and could be lower.

Information provided by the Strategy Sponsor about the level of any immediate component, terminal component and/or underlying commodity futures contract may not be indicative of future performance

Any information about the performance of any immediate component, terminal component and/or underlying commodity futures contract provided by the Strategy Sponsor will be or has been furnished as a matter of information only, and an investor in a financial instrument linked to the GS Strategy should not regard the information as indicative of the range of, or trends in, fluctuations in the levels or values that may occur in the future. Such information will likely differ from the actual values and levels used under the relevant methodology used to calculate the GS Strategy.

Information about the GS Strategy may only be available through the Strategy Sponsor

The rules for the GS Strategy are only available through the Strategy Sponsor. The Strategy Sponsor may not provide holders of any financial instrument linked to the GS Strategy with further information in relation to the GS Strategy beyond what is provided in the relevant Strategy Rules, and further information may not be generally available. The Strategy Sponsor has entered into non-exclusive licensing agreements with certain of its third party data suppliers in order to source the necessary data to calculate the GS Strategy. The formalities necessary to obtain access to such figures may deter potential investors from buying a financial instrument linked to the GS Strategy on the secondary market.

An investment in the GS Strategy is subject to risks associated with foreign commodities markets

The terminal components included in the GS Strategy (either directly or indirectly via its immediate components) may track the performance of a single commodity selected from a universe of different commodities in the commodity markets. Such commodities may be represented by commodity futures which (i) trade outside the United States on international exchanges, and/or (ii) are denominated in currencies other than United States dollars. An investor in a financial instrument linked to the GS Strategy should be aware that investments linked to the value of foreign commodity futures contracts involve particular risks.

Certain terminal components included in the GS Strategy may be linked to commodity futures contracts on physical commodities on trading facilities located outside the United States. The regulations of the Commodity Futures Trading Commission (the "**CFTC**") do not apply to trading on foreign trading facilities, and trading on foreign trading facilities may involve different and greater risks than trading on United States trading facilities. Certain foreign markets may be more susceptible to disruption than United States trading facilities due to the lack of a government-regulated clearinghouse system. Trading on foreign trading facilities also involves certain other risks that are not applicable to trading on United States trading facilities. Those risks may include: exchange rate risk relative to the U.S. dollar, exchange controls, expropriation, burdensome or confiscatory taxation, and moratoriums, and political or diplomatic events. It will also likely be more costly and difficult for the Strategy Sponsor, as the sponsor of the GS Strategy, to enforce the laws or regulations of a foreign country or trading facility, and it is possible that the foreign country or trading facility may not have laws or regulations which adequately protect the rights and interests of investors in the commodity futures contracts referenced by the GS Strategy. In addition, because foreign trading facilities may be open on days when the value of the GS Strategy is not published, the value of the commodity futures contracts referenced by the GS Strategy may change on days when the level of the GS Strategy is unavailable.

Suspension or disruptions of market trading in the commodity and related options futures markets may adversely affect the value of the GS Strategy

The commodity markets are subject to temporary distortions or other market disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. In addition, U.S. futures exchanges and some foreign exchanges have regulations that limit the amount of fluctuation in futures contract prices that may occur during a single business day. These limits are generally referred to as "daily price fluctuation limits" and the maximum or minimum price of a contract on any given day as a result of these limits is referred to as a "limit price." Once the limit price has been reached in a particular contract, no trades may be made at a different price. Limit prices have the effect of precluding trading in a particular contract or forcing the liquidation of contracts at disadvantageous times or prices. These circumstances could adversely affect the level of the terminal components in the GS Strategy and, therefore, the value of the GS Strategy and the value of any financial instruments linked to the GS Strategy.

Risks relating to commodity prices, single commodity sub-indices and commodity futures contracts

Exposure to commodity futures contracts through an investment in the GS Strategy that references commodity indices or strategies compared to "spot" prices

—   ***Rolling*** - It is typical in commodity markets to take the price of the first-nearby commodity futures contract with respect to a commodity (that is, as of a given date, the commodity futures contract first to expire following such date) as a reference for the "spot" price of such commodity. Over time such "spot" price will vary for two reasons. Firstly, the price of the first-nearby commodity futures contract will vary over time due to market fluctuations. Secondly, when the commodity futures contract which is considered to be the first-nearby contract changes from contract expiration "X" to contract expiration "Y" (as contract expiration "X" is approaching expiry), there is a discrete change in the price of the "prevailing" first-nearby

commodity futures contract. If contract expiration "Y" is trading at a premium to contract expiration "X" (referred to as a "contango" market, as described in further detail below), the discrete change will represent a "jump" in the "spot" price. If contract expiration "Y" is trading at a discount to contract expiration "X" (referred to as a "backwardated" market, as described in further detail below) the discrete change will represent a "drop" in price.

— **Effect of "jump" or "drop"** - Since a "jump" or "drop" does not correspond to a change in price of any given commodity futures contract, these economics cannot be captured by a futures-linked investment such as the GS Strategy. Therefore, all other things being equal (in particular, assuming no change in the relative price of the various contract expirations with respect to the relevant commodity futures contract), in a "contango" market a long-only futures-linked investment may be expected to underperform the "spot" price (due to not capturing the "jump" in spot price) and in a "backwardated" market a long-only futures-linked investment may be expected to outperform the "spot" price (due to not capturing the "drop" in spot price).

— "Backwardation" occurs when the price of a near-dated commodity futures contract is greater than the price of a longer-dated commodity futures contract, the market for such contracts is referred to as in "backwardation". "Contango" occurs when the price of the near-dated commodity futures contract is lower than the price of the longer-dated commodity futures contract, the market for such contracts is referred to as in "contango".

— Accordingly, investors in any financial instrument linked to the GS Strategy that references commodity indices or strategies as components may receive a lower payment upon redemption of such financial instrument than such investor would have received if he or she had invested directly in commodities underlying such commodity indices or strategies or a financial instrument whose redemption or settlement amount was based upon the spot price of physical commodities or commodity futures contracts that were scheduled to expire on the maturity date of the financial instrument.

Commodity prices are characterised by high and unpredictable volatility, which could lead to high and unpredictable volatility of the GS Strategy

Commodity prices, and, consequently, the prices of corresponding commodity futures contracts, are affected by various factors, including, but not limited to, supply and demand, liquidity, weather conditions and natural disasters, government programs and policies, political, military, terrorist and economic events as set out in more detail below.

— **Supply and demand** - The planning and management of commodities supplies is very time-consuming. This means that the scope for action on the supply side is limited and it is not always possible to adjust production swiftly to take account of demand. Demand can also vary on a regional basis. Transport costs for commodities in regions where these are needed also affect their prices. The fact that some commodities take a cyclical pattern, such as agricultural products which are only produced at certain times of the year, can also result in major price fluctuations.

— **Liquidity** - Not all commodities markets are liquid and able to quickly and adequately react to changes in supply and demand. The fact that there are only a few market participants in the commodities markets means that speculative investments can have negative consequences and may distort prices.

— **Weather conditions and natural disasters** - Unfavourable weather conditions can influence the supply of certain commodities for the entire year. This kind of supply crisis can lead to severe and unpredictable price fluctuations. Diseases and epidemics can also influence the prices of agricultural commodities.

— **Governmental programs and policies, national and international political, military and economic events and trading activities in commodities and related contracts** - Commodities are often produced in emerging market countries, with demand coming principally from industrialised nations. The political and economic situation is however far less stable in many emerging market countries than in the developed world. They are generally much more susceptible to the risks of rapid political change and economic setbacks. Political crises can affect purchaser confidence, which can as a consequence affect commodity prices. Armed conflicts can also impact on the supply and demand for certain commodities. It is also possible for industrialised nations to impose embargos on imports and exports of goods and services. This can directly and indirectly impact commodity prices. Furthermore, numerous commodity

producers have joined forces to establish organisations or cartels in order to regulate supply and influence prices.

These factors may adversely affect the value of the GS Strategy and the value of any financial instrument linked thereto in varying ways, and different factors may cause the value and volatility of different commodities to move in inconsistent directions and at inconsistent rates.

Change in the composition or discontinuance of a S&P GSCI® Single Commodity Sub-Index referenced by the GS Strategy could affect the level of the GS Strategy

The GS Strategy may reference certain S&P GSCI® Single Commodity Sub-Indices (whether directly or indirectly via its immediate components). These S&P GSCI® Single Commodity Sub-Indices are calculated and maintained by S&P Dow Jones Indices LLC, a subsidiary of The McGraw Hill Companies, Inc. as sponsor, who is also responsible for the composition of such S&P GSCI® Single Commodity Sub-Indices. The sponsor will have no involvement in the offer and sale of any financial instrument linked to the GS Strategy and will have no obligation to any purchaser of such financial instruments. The sponsor of the S&P GSCI® Single Commodity Sub-Indices referenced by the GS Strategy may take any actions in respect of such S&P GSCI® Single Commodity Sub-Indices without regard to the interests of the Strategy Sponsor of the GS Strategy or any investors in financial instruments linked to the GS Strategy, and any of these actions could adversely affect the level of the GS Strategy together with the market value of any financial instruments linked to the GS Strategy.

The sponsor of the S&P GSCI® Single Commodity Sub-Indices referenced by the GS Strategy can substitute the commodity futures contracts underlying such S&P GSCI® Single Commodity Sub-Indices (for example, if a commodity futures contract referenced by a S&P GSCI® Single Commodity Sub-Index were to be delisted, terminated or replaced by the relevant exchange on which such underlying commodity futures contract is traded) or make other changes to the methodology for calculating such S&P GSCI® Single Commodity Sub-Indices. The composition of a S&P GSCI® Single Commodity Sub-Index may also change over time as additional commodity contracts satisfy the eligibility criteria or commodity contracts currently referenced by such S&P GSCI® Single Commodity Sub-Index fail to satisfy such criteria. Such changes to the composition of any S&P GSCI® Single Commodity Sub-Index referenced by the GS Strategy may affect the level of such S&P GSCI® Single Commodity Sub-Index as any newly added commodity futures contract may perform significantly worse or better than the commodity futures contract it replaces, which in turn, may affect the level of the GS Strategy. The sponsor of a S&P GSCI® Single Commodity Sub-Index referenced by the GS Strategy may also alter, discontinue or suspend calculation or dissemination of such S&P GSCI® Single Commodity Sub-Index. In such circumstances, the Strategy Sponsor would have the discretion to make determinations with respect to the level of the GS Strategy including for the purposes of calculating the amount payable on any financial instrument linked to the GS Strategy.

The S&P GSCI® Single Commodity Sub-Indices referenced by the GS Strategy may in the future reference commodity futures contracts that are not traded on regulated futures exchanges

The S&P GSCI® Single Commodity Sub-Indices referenced by the GS Strategy (whether directly or indirectly via its immediate components) are based solely on commodity futures contracts traded on regulated futures exchanges (referred to in the United States as "**designated contract markets**"). At present, these S&P GSCI® Single Commodity Sub-Indices continue to be comprised exclusively of regulated commodity futures contracts. However, the S&P GSCI® Single Commodity Sub-Indices referenced by the GS Strategy may in the future reference over-the-counter contracts (such as swaps and forward contracts) traded on trading facilities that are subject to lesser degrees of regulation or, in some cases, no substantive regulation. As a result, trading in such commodity futures contracts, and the manner in which prices and volumes are reported by the relevant trading facilities, may not be subject to the same provisions of, and the protections afforded by, the U.S. Commodity Exchange Act 1936, as amended, or other applicable statues and related regulations, that govern trading on regulated futures exchanges. In addition, many electronic trading facilities have only recently initiated trading and do not have significant trading histories. As a result, the trading of commodity futures contracts on such facilities and the inclusion of such commodity futures contracts in any S&P GSCI® Single Commodity Sub-Index referenced by the GS Strategy may be subject to certain risks not presented by most exchange-traded futures contracts, including risks related to the liquidity and price histories of the relevant commodity futures contracts.

Some of the S&P GSCI® Single Commodity Sub-Indices referenced by the GS Strategy may be subject to pronounced risks of pricing volatility

As a general matter, the risk of low liquidity or volatile pricing around the maturity date of a commodity futures contract is greater than in the case of other futures contracts because (among other factors) a number of market participants take physical delivery of the underlying commodities. Many commodities, like those in the energy and industrial metals sectors, have liquid futures contracts that expire every month. Therefore, these futures contracts are rolled forward every month. Futures contracts based on certain other commodities, most notably agricultural and livestock products, tend to have only a few contract months each year that trade with substantial liquidity. Thus, these commodities, with related futures contracts that expire infrequently, roll forward less frequently than every month, and can have further pronounced pricing volatility during extended periods of low liquidity. In respect of S&P GSCI® Single Commodity Sub-Indices that represent energy, it should be noted that due to the significant level of continuous consumption, limited reserves, and oil cartel controls, energy commodities are subject to rapid price increases in the event of perceived or actual shortages. These factors (when combined or in isolation) may affect the price of commodity futures contracts and, as a consequence, the performance of the GS Strategy.

Commodities are subject to legal and regulatory regimes that may change in ways that could affect the level of the GS Strategy and/or affect the ability of the Strategy Sponsor, an issuer or other relevant entities to enter into or maintain hedging transactions

Commodities are subject to legal and regulatory regimes in the United States and, in some cases, in other countries that may change in ways that could negatively affect the value of the GS Strategy and are expected to increase the cost of transacting derivatives. This could have an adverse impact on the level of the GS Strategy.

GOLDMAN SACHS COMMODITY RISK PREMIA METHODOLOGY DESCRIPTION

Version 1.2

Dated: 28 May 2019

1.   Introduction

This documentation element, the Goldman Sachs Commodity Risk Premia Methodology Description, as may be amended from time to time (the "**Commodity Risk Premia Methodology Description**") constitutes the Relevant General Strategy Description for the purposes of, and should be read in conjunction with the Goldman Sachs General Basket Strategy Base Description (the "**General Basket Strategy Base Description**") and utilises the methodology set out therein to calculate the level of a particular GS Strategy. This Commodity Risk Premia Methodology Description sets out certain information required to complete the General Basket Strategy Base Description as well as certain other rules, methodology, definitions and other information applicable to a particular GS Strategy.

This Commodity Risk Premia Methodology Description shall be deemed to supersede and replace in its entirety all previous versions of the Goldman Sachs Commodity Multi-Signal Methodology Description. This Commodity Risk Premia Methodology Description may be amended or modified from time to time. Upon each such amendment or modification this document shall be updated to a new version. Following an update, the most recent version shall be deemed to be in force from the date of such update and replace in its entirety the preceding version such that, in the event of any conflict between the preceding version and the most recent version, the most recent version shall prevail.

This Commodity Risk Premia Methodology Description should be read in conjunction with the relevant specifications annex (the "**Relevant Specifications Annex**") where such documentation element is specified to be applicable to such GS Strategy. The Relevant Specifications Annex will set out the name of the particular GS Strategy, the Strategy Publication Data Source, certain specifications relating to the components and any other information applicable to such GS Strategy.

The Strategy Rules in respect of any GS Strategy to which this Commodity Risk Premia Methodology Description applies shall be constituted of the following documentation elements read together:

(i)   the Relevant Specifications Annex in respect of such GS Strategy;

(ii)   this Commodity Risk Premia Methodology Description;

(iii)   the General Basket Strategy Base Description;

(iv)   the General Index Provisions; and

(v)   in respect of each component included in such GS Strategy, the relevant rules in respect of each component (if applicable),

and in the event of any inconsistency between these documentation elements, the provisions shall prevail according to the order given above (e.g., the provisions of the Relevant Specifications Annex shall prevail over all other documentation elements).

2.   Immediate Components

The GS Strategy consists of certain Immediate Components, each of which is either a Goldman Sachs proprietary strategy or a third party sponsored index.

3.   Immediate Component Weights and the Commodity Risk Premia Methodology

In order to calculate the level of the GS Strategy, the Strategy Sponsor will first have to determine the weight (called the "**Immediate Component Weight**") of each Immediate Component included in the GS Strategy. The Immediate Component Weight of each Immediate Component included in the GS Strategy will be determined in accordance with a Goldman Sachs proprietary methodology called the "**Commodity Risk Premia Methodology**". The Immediate Component Weight of each Immediate Component will be calculated periodically on each Decision Date (as determined in accordance with the Decision Date Rule set out in the Relevant Specifications Annex). The Immediate Component Weight calculated on each Decision Date will take effect from the corresponding Rebalancing Date (as set out in the Relevant Specifications Annex). The Commodity Risk Premia Methodology will calculate the Immediate Component Weight of each Immediate Component by reference to the "Preliminary Weight" of such Immediate Component in accordance with the "Immediate

Component Weight Determination Process" (as described below). The "Preliminary Weight" of each Immediate Component is in turn determined by reference to the "Signal" of such Immediate Component in accordance with the "Preliminary Weight Determination Process" (as described below).

Determination of the Signal in respect of an Immediate Component

The Commodity Risk Premia Methodology will calculate a signal (called the "**Signal**") for each Immediate Component by reference to one or more signal styles (called the "**Signal Style**"), being either "**Carry**", "**Exponential Trend**", "**Point-to-point Trend**", "**COT**", "**SAGE**" or "**Seasonality Adjustment**", as specified in the Relevant Specifications Annex. The Relevant Specifications Annex will specify one or more set of inputs (each called a "**Signal Specification Set**") relating to each applicable Signal Style.

On each of the Observation Date(s) in respect of a Decision Date, the Strategy Sponsor will calculate a signal (called the "**Raw Signal**") in respect of each Immediate Component and each Signal Specification Set specified in the Relevant Specifications Annex as more particularly described in paragraph 1 (*Determination of the Raw Signal*) of Section B: *Determination of the Signal* and the Relevant Signal Style Annex. If no Signal Style is specified in the Relevant Specifications Annex (or if the Signal Style is specified to be "Not Applicable" in any Signal Specification Set), the Raw Signal will be equal to one (1).

The Raw Signal is then used to determine a value (called the "**Individual Signal**") in respect of an Immediate Component, an Observation Date and a Signal Specification Set. The Individual Signal will be: (i) if "Use Signal Sign" is not applicable, equal to the Raw Signal in respect of such Signal Specification Set and such Immediate Component, or (ii) if "Use Signal Sign" is applicable, equal to (a) if the Raw Signal is greater than or equal to zero, one (1), or (b) if the Raw Signal is less than zero, *minus* one (-1).

Thereafter, the Individual Signal is used to determine the "Signal" in respect of an Immediate Component and an Observation Date. If "Signal Combination" is not applicable, or if there is only one Signal Specification Set specified, the Signal will be equal to its Individual Signal. If "Signal Combination" is applicable, or if there is more than one Signal Specification Set specified, the Signal will be: (i) if "Signal Adjust Method" is "Weighted Average", equal to the weighted sum of the Individual Signals in respect of each Signal Specification Set or (ii) if "Signal Adjust Method" is not applicable or is not so specified, the arithmetic average of the Individual Signals in respect of each Signal Specification Set.

Determination of the Immediate Component Weight of an Immediate Component

The Preliminary Weight Determination Process

In order to determine the Immediate Component Weight in respect of an Immediate Component the Strategy Sponsor will first calculate its Preliminary Weight. The Preliminary Weight in respect of an Immediate Component and an Observation Date is determined by applying each of the following steps that are specified to be applicable in respect of the GS Strategy to the Signal in respect of such Immediate Component and such Observation Date (each as more particularly described in Section C: *Preliminary Weight Determination Process* of this Commodity Risk Premia Methodology Description):

(i)   The "Weight Method" step;

(ii)   The "Volatility Targeting" step;

(iii)   The "Weight Mapping" step;

(iv)   The "Weight Adjusting" step; and

(v)   The determination of the Preliminary Weight.

The Immediate Component Weight Determination Process

The Immediate Component Weight in respect of an Immediate Component and a Rebalancing Date is determined by applying each of the following steps that are specified to be applicable in respect of the GS Strategy to the Preliminary Weight in respect of such Immediate Component and the Observation Date(s) in respect of the Decision Date corresponding to such Rebalancing Date (each as more particularly described in Section D: *Immediate Component Weight Determination Process* of this Commodity Risk Premia Methodology Description):

(i)   The "Weight Smoothing" step;

(ii)   The "Basket Volatility Targeting" step;

(iii)   The "Weight Capping" step;

(iv)   the "Weight Rounding" step; and

(v)   The determination of the Immediate Component Weight.

Section B: Determination of the Signal

1.   Determination of the Raw Signal

On each Observation Date *o*, the Strategy Sponsor will determine the raw signal (the "**Raw Signal**") in respect of each Eligible Immediate Component *ic* and each Signal Specification Set *i* in accordance paragraph (i) or (ii) below (as applicable):

(i)   if a Signal Style is specified in respect of such Signal Specification Set *i* in the Relevant Specifications Annex, the Raw Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i*, and such Observation Date *o* shall be determined in accordance with the Relevant Signal Style Annex in respect of Signal Specification Set *i*; or

(ii)   if "Signal Style" is specified to be "Not Applicable" or no Signal Style is specified in respect of such Signal Specification Set *I*, the Raw Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i*, and such Observation Date *o* shall be equal to one (1).

2.   Determination of the Individual Signal

On each Observation Date *o*, the Strategy Sponsor will determine a signal (the "**Individual Signal**") in respect of each Eligible Immediate Component *ic* and each Signal Specification Set *i* in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if "Use Signal Sign" is specified to be "Not Applicable" or is not so specified in respect of such Signal Specification Set *i* in the Relevant Specifications Annex, the Individual Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i*, and such Observation Date *o* shall be equal to the Raw Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i* and such Observation Date *o*; or

(ii)   if "Use Signal Sign" is specified to be "Applicable" in respect of such Signal Specification Set *i* in the Relevant Specifications Annex, the Individual Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i* and such Observation Date *o* shall be determined by the Strategy Sponsor in accordance with paragraph (a) or (b) below (as applicable):

(a)   if the Raw Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i* and such Observation Date *o* is greater than or equal to zero, the Individual Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i* and such Observation Date *o* shall be equal to one (1); or

(b)   if the Raw Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i* and such Observation Date *o* is less than zero, the Individual Signal in respect of such Eligible Immediate Component *ic*, such Signal Specification Set *i* and such Observation Date *o* shall be equal to *minus* one (-1).

3.   Determination of the Signal

On each Observation Date *o*, the Strategy Sponsor will determine a signal (the "**Signal**") in respect of each Eligible Immediate Component *ic* in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if "Signal Combination" is specified to be "Not Applicable" in the Relevant Specifications Annex or is not so specified and there is only one Signal Specification Set specified in the Relevant Specifications Annex, the Signal in respect of such Eligible Immediate Component *ic* and such Observation Date *o* shall be equal to the Individual Signal in respect of such Eligible Immediate Component *ic*, such Observation Date *o* and the Signal Specification Set specified in the Relevant Specifications Annex; or

(ii)   if "Signal Combination" is specified to be "Applicable" in the Relevant Specifications Annex and there is more than one Signal Specification Set specified in the Relevant Specifications Annex, the Signal in respect of such Eligible Immediate Component *ic* and such Observation Date *o* shall be determined in accordance with paragraph (a) or (b) below (as applicable):

(a)   if "Signal Adjust Method" is specified to be "Weighted Average" in the Relevant Specifications Annex, the Signal in respect of such Eligible Immediate Component *ic* and such Observation Date *o* shall be determined in accordance with the following formula:

$$\text{Signal}_{ic}(o) = \sum_i \text{Individual Signal}^i_{ic}(o) \times \text{Signal Weight}(i)$$

Where the summation over "**i**" is taken over each Signal Specification Set specified in the Relevant Specification Annex, and:

"**Individual Signal$_{ic}^{i}$(o)**" means the Individual Signal in respect of Eligible Immediate Component *ic*, Observation Date *o* and Signal Specification Set *i*;

"**Signal Weight(i)**" means the Signal Weight in respect of Signal Specification Set *i*; and

"**Signal$_{ic}$(o)**" means the Signal in respect of Eligible Immediate Component *ic* and Observation Date *o.*

(b)   if "Signal Adjust Method" is specified to be "Not Applicable" in the Relevant Specifications Annex or is not so specified, the Signal in respect of Eligible Immediate Component *ic* and Observation Date *o* shall be determined in accordance with the following formula:

$$\text{Signal}_{ic}(o) = \sum_{i} \text{Individual Signal}_{ic}^{i}(o) \times \frac{1}{N}$$

Where the summation over "**i**" is taken over each Signal Specification Set specified in the Relevant Specification Annex, and:

"**N**" is the total number of Signal Specification Sets specified in the Relevant Specifications Annex.

Section C: Preliminary Weight Determination Process

In order to determine the Preliminary Weight in respect of a Eligible Immediate Component and each Observation Date, the Strategy Sponsor will sequentially apply each of the following steps described in this Section C: *Preliminary Weight Determination Process* of this Commodity Risk Premia Methodology Description that are specified to be applicable in respect of the GS Strategy to the Signal in respect of each Eligible Immediate Component (as determined in accordance with Section B: *Determination of the Signal* of this Commodity Risk Premia Methodology Description):

(i)   the "Weight Method Step";

(ii)   the "Volatility Targeting Step";

(iii)   the "Weight Mapping Step";

(iv)   the "Weight Adjusting Step"; and

(v)   the "Determination of the Preliminary Weight",

and together, the "**Preliminary Weight Determination Process**").

Each step of the Preliminary Weight Determination Process (other than the first step) utilises a "Weight Input" in respect of an Eligible Immediate Component and an Observation Date and each step of the Preliminary Weight Determination Process (other than the final step) calculates a "Weight Output" in respect of an Eligible Immediate Component and an Observation Date. In respect of each step of the Preliminary Weight Determination Process (other than the first step), the Weight Input in respect of an Eligible Immediate Component, an Observation Date and such step shall be equal to the Weight Output in respect of such Immediate Component, such Observation Date and the immediately preceding step in the Preliminary Weight Determination Process that is specified to be applicable in respect of the GS Strategy.

For the avoidance of doubt, any Immediate Component that does not satisfy the definition of Eligible Immediate Component in respect of an Observation Date will be assigned a Preliminary Weight of 0 (zero) in respect of such Observation Date.

1.   Weight Method Step

This Weight Method Step is applicable in respect of each GS Strategy. On each Observation Date o, the Strategy Sponsor will determine the Weight Output in respect of each Eligible Immediate Component ic and this Weight Method Step in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if "Base Weight Method" is specified as "Cross-sectional" in the Relevant Specifications Annex, the Weight Output in respect of such Eligible Immediate Component ic, such Observation Date o and this Weight Method Step will be determined in accordance with paragraph 1.1 (*Cross-sectional Weight Method*) of this Section C: *Preliminary Weight Determination Process*; or

(ii)   if "Base Weight Method" is specified as "Timeseries" in the Relevant Specifications Annex, the Weight Output in respect of such Eligible Immediate Component ic, such Observation Date o and this Weight Method Step will be determined in accordance with paragraph 1.2 (*Timeseries Weight Method*) of this Section C: *Preliminary Weight Determination Process*.

1.1   Cross-sectional Weight Method

1.1.1   Determination of the Signal Rank

On each Observation Date, the Strategy Sponsor will rank each Eligible Immediate Component according to its Signal in respect of such Observation Date (such ranking in respect of an Eligible Immediate Component, its "**Signal Rank**"). The Eligible Immediate Component with the highest Signal shall be assigned a Signal Rank in respect of such Observation Date of 1 and the Eligible Immediate Component with the lowest Signal shall be assigned a Signal Rank in respect of such Observation Date equal to the total number of Eligible Immediate Components included in the GS Strategy in respect of such Observation Date (such number, "**N**"). In the event that the Signal in respect of two or more Eligible Immediate Components are identical, then, among such Eligible Immediate Components, for the purposes of determining the Signal Rank, the Eligible Immediate Component with the highest Signal Rank on the immediately preceding Strategy Calculation Day shall be deemed to have the highest Signal Rank, the Eligible Immediate Component with the second highest Signal Rank on the immediately preceding Strategy Calculation Day shall be deemed to have the second highest Signal Rank and so on. The Signal Rank on a Strategy Calculation Day will be determined in the same manner as it is determined on an Observation Date (as described in this paragraph).

1.1.2 Determination of the Weight Output

The Weight Output in respect of each Eligible Immediate Component, an Observation Date and the Weight Method Step shall be determined by reference to its Signal Rank as follows:

(i)   each Eligible Immediate Component with a Signal Rank from, and including, 1 to, and including, the Signal Rank equal to the Number of Long Immediate Components, will be assigned a Weight Output equal to the *quotient* of (a) the Leverage Factor, *divided* by (b) the Number of Long Immediate Components;

(ii)   each Eligible Immediate Component with a Signal Rank from, but excluding, the Signal Rank equal to (a) N *minus* (b) the Number of Short Immediate Components to, and including, the Signal Rank equal to N, will be assigned a Weight Output equal to the *quotient* of (I) the *product* of (A) *minus* 1 (-1), *multiplied* by (B) the Leverage Factor, *divided* by (II) the Number of Short Immediate Components; and

(iii)   all other Eligible Immediate Components not mentioned in paragraphs (i) and (ii) above (if any) will be assigned a Weight Output of zero.

1.2 Timeseries Weight Method

The Weight Output in respect of each Eligible Immediate Component *ic*, an Observation Date *o* and the Weight Method Step shall be equal to the *product* of (i) the Signal in respect of such Eligible Immediate Component *ic* and such Observation Date o, *multiplied* by (ii) the Target Weight in respect of such Eligible Immediate Component *ic* and such Observation Date *o*.

2. Volatility Targeting Step

If "Volatility Targeting" is specified to be "Not Applicable" in the Relevant Specifications Annex, or is not so specified, this Volatility Targeting Step shall not apply in respect of the GS Strategy.

If "Volatility Targeting" is specified to be "Applicable" in the Relevant Specifications Annex, on each Observation Date *o*, the Strategy Sponsor will determine the Weight Output in respect of each Eligible Immediate Component *ic* and this Volatility Targeting Step as the *product* of (i) the Weight Input in respect of such Eligible Immediate Component *ic*, such Observation Date *o* and this Volatility Targeting Step, *multiplied* by (ii) the Scaling Factor in respect of such Eligible Immediate Component *ic* and such Observation Date *o*. The "Scaling Factor" shall be determined in accordance with paragraph 2.1 (*Determination of the Scaling Factor*) of this Section C: *Preliminary Weight Determination Process* below).

2.1 Determination of the Scaling Factor

On each Observation Date *o*, the Strategy Sponsor will determine a number (the "**Scaling Factor**") in respect of each Eligible Immediate Component *ic* in accordance with the following formula:

$$SF_{ic}(o) = Min\left(\frac{VT_{ic}}{RV_{ic}(o)} ; WC_{ic}\right)$$

Where:

"*Min*" followed by a series of amounts inside brackets, means whichever is the lesser of the amounts separated by a semi-colon inside those brackets;

"$RV_{ic}(o)$" means the realised volatility in respect of Eligible Immediate Component *ic* and Observation Date *o*, as calculated by the Strategy Sponsor in accordance with the following formula:

$$RV_{ic}(o) = \sqrt{\frac{252}{Num-1} \sum_{t=VLD(o)+1}^{o} \left(Rtn_{ic}(t) - \left(\frac{1}{Num} \times \left[\sum_{s=VLD(o)+1}^{o} Rtn_{ic}(s)\right]\right)\right)^2}$$

Where the summations over "**t**" and "**s**" are, in each case, taken over each Strategy Calculation Day falling in the period commencing on, and including, VLD(o)+1 and ending on, and including, Observation Date *o*, and:

"**Num**" means the number of Strategy Calculation Days falling in the period commencing on, and including, VLD(o)+1 and ending on, and including, Observation Date *o*;

"**Rtn_{ic}(t)**" means the Daily Return in respect of Eligible Immediate Component *ic* and Strategy Calculation Day *t*;

"**VLD(o)+1**" means the Strategy Calculation Day immediately following the Volatility Lookback Date in respect of Observation Date *o*;

"**Volatility Lookback Date**" means, in respect of an Observation Date, the date determined by applying the Volatility Lookback Rule to such Observation Date; and

"**Volatility Lookback Rule**" means the rule used to determine the Volatility Lookback Date in respect of an Observation Date, as specified in the Relevant Specifications Annex.

"**SF_{ic}(o)**" means the Scaling Factor in respect of Eligible Immediate Component *ic* and Observation Date *o*;

"**VT_{ic}**" means the Volatility Target in respect of Eligible Immediate Component *ic* as specified in the Relevant Specifications Annex;

"**WC_{ic}**" means the Weight Cap in respect of Eligible Immediate Component *ic* as specified in the Relevant Specifications Annex; and

"**Weight Cap**" means, in respect of an Immediate Component, the number specified as such in the Relevant Specifications Annex.

3.   Weight Mapping Step

If "Weight Mapping" is specified to be "Not Applicable" in the Relevant Specifications Annex, or is not so specified, this Weight Mapping Step shall not apply in respect of the GS Strategy.

If "Weight Mapping" is specified to be "Applicable" in the Relevant Specifications Annex, on each Observation Date *o*, the Strategy Sponsor will determine the Weight Output in respect of each Eligible Immediate Component *ic* and this Weight Mapping Step as being equal to the Weight Mapping Value in respect of the Weight Input in respect of such Eligible Immediate Component *ic*, such Observation Date *o* and this Weight Mapping Step.

Where "**Weight Mapping Value**" means, in respect of a Weight Input, the value in the column entitled "Weight Mapping Value" as set out in the Weight Mapping Table in the Relevant Specifications Annex, in the row corresponding to a particular range of values, such that the Weight Input is (i) strictly greater than the value specified in the column entitled "Lower Bound" of such row, and (ii) less than or equal to the value specified in the column entitled "Upper Bound" of such row.

4.   Weight Adjusting Step

If "Weight Adjusting" is specified to be "Not Applicable" in the Relevant Specifications Annex, or is not so specified, this Weight Adjusting Step shall not apply in respect of the GS Strategy.

If "Weight Adjusting" is specified to be "Applicable" in the Relevant Specifications Annex, on each Observation Date *o*, the Strategy Sponsor will determine the Weight Output in respect of each Eligible Immediate Component *ic* and this Weight Adjusting Step as the *product* of (i) the Weight Input in respect of such Eligible Immediate Component *ic*, such Observation Date *o* and this Weight Adjusting Step, *and* (ii) the Weight Adjusting Factor in respect of such Eligible Immediate Component *ic* and such Observation Date *o*, which shall be equal to one (1) unless otherwise set out in the Relevant Specifications Annex.

5.   Determination of the Preliminary Weight

This Determination of the Preliminary Weight step is applicable in respect of each GS Strategy. On each Observation Date *o*, the Strategy Sponsor will determine the Preliminary Weight in respect of each Immediate Component *ic* and such Observation Date *o* in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if such Immediate Component *ic* is an Eligible Immediate Component in respect of Observation Date *o*, the Preliminary Weight in respect of such Immediate Component *ic* and Observation Date *o* shall be equal to the Weight Output in respect of such Eligible Immediate Component, such Observation Date and the the immediately preceding step in the Preliminary Weight Determination Process that is specified to be applicable in respect of the GS Strategy.

(ii)   if such Immediate Component *ic* is not an Eligible Immediate Component in respect of Observation Date *o*, the Preliminary Weight in respect of such Immediate Component *ic* and Observation Date *o* shall be 0 (zero).

Section D: Immediate Component Weight Determination Process

In order to determine the Immediate Component Weight in respect of an Immediate Component and a Rebalancing Date, on the Decision Date corresponding to such Rebalancing Date, the Strategy Sponsor will sequentially apply each of the following steps described in this Section D: *Immediate Component Weight Determination Process* of this Commodity Risk Premia Methodology Description that are specified to be applicable in respect of the GS Strategy to the Preliminary Weight in respect of each Immediate Component (as determined in accordance with Section C: *Preliminary Weight Determination Process* of this Commodity Risk Premia Methodology Description):

(i)   the "Weight Smoothing Step";

(ii)   the "Basket Volatility Targeting Step";

(iii)   the "Weight Capping Step";

(iv)   the "Weight Rounding Step"; and

(v)   the "Determination of the Immediate Component Weight",

and together, the "**Immediate Component Weight Determination Process**".

Each step of the Immediate Component Weight Determination Process (other than the first step) utilises a "Weight Input" in respect of an Immediate Component and a Decision Date and each step of the Immediate Component Weight Determination Process (other than the final step) calculates a "Weight Output" in respect of an Immediate Component and a Decision Date. In respect of each step of the Immediate Component Weight Determination Process (other than the first step), the Weight Input in respect of an Immediate Component, a Decision Date and such step shall be the Weight Output in respect of such Immediate Component, such Decision Date and the immediately preceding step in the Immediate Component Weight Determination that is specified to be applicable in respect of the GS Strategy.

1.   Weight Smoothing Step

This Weight Smoothing Step is applicable in respect of each GS Strategy. On each Decision Date *d*, the Strategy Sponsor will determine the Weight Output in respect of each Immediate Component *ic*, such Decision Date *d* and this Weight Smoothing Step in accordance with the following formula:

$$\text{Weight Output}_{ic}(d) = \text{Average Preliminary Weight}_{ic}(d)$$

Where:

"**Average Preliminary Weight$_{ic}$(d)**" means, in respect of Immediate Component *ic* and Decision Date *d*, the arithmetic average of the Preliminary Weights in respect of Immediate Component *ic* for each of the Observation Dates in relation to Decision Date *d*; and

"**Weight Output$_{ic}$(d)**" means the Weight Output in respect of Immediate Component *ic*, Decision Date *d* and this Weight Smoothing Step;

2.   Basket Volatility Targeting Step

If "Basket Volatility Targeting" is specified to be "Not Applicable" in the Relevant Specifications Annex, or is not so specified, this Basket Volatility Targeting Step shall not apply in respect of the GS Strategy.

If "Basket Volatility Targeting" is specified to be "Applicable" in the Relevant Specifications Annex, on each Decision Date *d*, the Strategy Sponsor will determine the Weight Output in respect of each Immediate Component *ic*, such Decision Date *d* and this Basket Volatility Targeting Step in accordance with the following formula:

$$\text{Weight Output}_{ic}(d) = \text{Weight Input}_{ic}(d) \times \frac{\text{BVT}}{\text{MHRV(d)}}$$

Where:

"**BVT**" or "**Basket Volatility Target**" means the number specified as such in the Relevant Specifications Annex;

"**MHRV(d)**" means the Maximum Hypothetical Realised Volatility in respect of Decision Date *d* determined in accordance with paragraph 2.1 (*Determination of the Maximum Hypothetical Realised Volatility*) of this Section D: *Immediate Component Weight Determination Process*;

"**Weight Input_{ic}(d)**" means the Weight Input in respect of Immediate Component *ic*, Decision Date *d* and this Basket Volatility Targeting Step; and

"**Weight Output_{ic}(d)**" means the Weight Output in respect of Immediate Component *ic*, Decision Date *d* and this Basket Volatility Targeting Step.

2.1 Determination of the Maximum Hypothetical Realised Volatility

On each Decision Date *d*, the Strategy Sponsor will determine the "**Maximum Hypothetical Realised Volatility**" in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if more than one Basket Volatility Targeting Lookback Rule is specified in the Relevant Specifications Annex, the Maximum Hypothetical Realised Volatility in respect of such Decision Date *d* shall be equal to the highest Hypothetical Realised Volatility determined in respect of such Decision Date *d* and each such Basket Volatility Targeting Lookback Rule; or

(ii)   if only one Basket Volatility Targeting Lookback Rule is specified in the Relevant Specifications Annex, the Maximum Hypothetical Realised Volatility in respect of such Decision Date *d* shall be equal to the Hypothetical Realised Volatility determined in respect of such Decision Date *d* and such Basket Volatility Targeting Lookback Rule.

Where "**Hypothetical Realised Volatility**" is determined in accordance with paragraph 2.2 (*Determination of the Hypothetical Realised Volatility*) of this Section D: *Immediate Component Weight Determination Process*.

2.2 Determination of the Hypothetical Realised Volatility

On each Decision Date *d*, the Strategy Sponsor will determine the hypothetical realised volatility (the "**Hypothetical Realised Volatility**" or "**HRV(r,d)**") in respect of the Hypothetical Index, Decision Date *d* and Basket Volatility Targeting Lookback Rule *r* in accordance with the paragraph (i) or (ii) below (as applicable):

(i)   if "Exponential Volatility Targeting" is specified to be "Not Applicable" or is not so specified in the Relevant Specifications Annex, the Hypothetical Realised Volatility in respect of the Hypothetical Index, Decision Date *d* and Basket Volatility Targeting Lookback Rule *r* shall be determined in accordance with the following formula:

$$HRV(r,d) = \sqrt{\frac{AF}{N-1} \sum_{t=BVTL(r,d)+1}^{d} \left(HR(t,d) - \frac{1}{N} \sum_{s=BVTL(r,d)+1}^{d} HR(s,d) \right)^2}$$

(iii)   if "Exponential Volatility Targeting" is specified to be "Applicable" in the Relevant Specifications Annex, the Hypothetical Realised Volatility in respect of the Hypothetical Index, Decision Date *d* and Basket Volatility Targeting Lookback Rule *r* shall be determined in accordance with the following formula:

$$HRV(r,d) = \sqrt{\frac{AF}{1 - \sum_{k=BVTL(r,d)+1}^{d} w(k,d)^2} \sum_{t=BVTL(r,d)+1}^{d} w(t,d) \times \left(HR(t,d) - \sum_{s=BVTL(r,d)+1}^{d} (HR(s,d) \times w(s,d)) \right)^2}$$

Where the summations over "**t**", "**s**" and "**k**" are, in each case, taken over each Strategy Calculation Day falling in the period commencing on, and including, BVTL(r,d)+1 and ending on, and including, Decision Date *d*, and:

"**AF**" or "**Annualization Factor**" is the number specified as such in the Relevant Specifications Annex, or if not so specified, 252;

"**Basket Volatility Targeting Lookback Date**" means, in respect of a Strategy Calculation Day

and a Basket Volatility Targeting Lookback Rule, the date determined by applying such Basket Volatility Targeting Lookback Rule to such Strategy Calculation Day;

"**Basket Volatility Targeting Lookback Rule**" means each rule used to determine a Basket Volatility Targeting Lookback Date in respect of a Decision Date, as specified in the Relevant Specifications Annex;

"**BVTL(r,d)**" means the Basket Volatility Targeting Lookback Date in respect of Decision Date *d* in and Basket Volatility Targeting Lookback Rule *r*;

"**BVTL(r,d)+1**" means the Strategy Calculation Day immediately following BVTL(r,d);

"**HR(s,d)**" means the return of the Hypothetical Index in respect of Strategy Calculation Day *s* and Decision Date *d*, determined in accordance with the definition of "HR(t,d)" provided that each reference to "Strategy Calculation Day *t*" is deemed to be a reference to "Strategy Calculation Day *s*";

"**HR(t,d)**" means, in respect of a Strategy Calculation Day *t* and Decision Date *d*, the return of the Hypothetical Index measured from, and including, the Strategy Calculation Day immediately preceding Strategy Calculation Day *t* to, and including, Strategy Calculation Day *t*, determined in accordance with the following formula:

$$HR(t, d) = \sum_{ic} \left(Rtn_{ic}(t) \times \text{Weight Input}_{ic}(d) \right)$$

Where the summation over "**ic**" is taken over each Immediate Component included in the GS Strategy (each of which is also a component of the Hypothetical Index), and:

"**Rtn_ic(t)**" means the Daily Return in respect of Immediate Component *ic* and Strategy Calculation Day *t*; and

"**Weight Input_ic(d)**" means the Weight Input in respect of Immediate Component *ic*, Decision Date *d* and this Basket Volatility Targeting Step;

"**Hypothetical Index**" means an index reflecting a notional investment in a basket comprising the same Immediate Components as the GS Strategy;

"**N**" means the number of Strategy Calculation Days falling in the period commencing on, and including, BVTL(r,d)+1 and ending on, and including, Decision Date *d*;

"**w(k,d)**" means the exponential weight in respect of Strategy Calculation Day *k* and Decision Date *d*, determined in accordance with the following formula:

$$w(k, d) = \frac{\alpha \times (1 - \alpha)^{N(k,d)}}{\sum_{i=1}^{N}(\alpha \times (1 - \alpha)^{i})}$$

Where:

"**N(k,d)**" means, in respect of Strategy Calculation Day *k* and Decision Date *d*, the number of Strategy Calculation Days falling in the period commencing on, and including, Strategy Calculation Day *k* and ending on, and including, Decision Date *d*; and

"**α**" or "**Exponential Volatility Targeting Factor**" means the number specified as such in the Relevant Specifications Annex;

"**w(s,d)**" means the exponential weight in respect of Strategy Calculation Day *s* and Decision Date *d*, determined in accordance with the definition of "w(k,d)", provided that each reference to "Strategy Calculation Day *k*" is deemed to be a reference to "Strategy Calculation Day *s*"; and

"**w(t,d)**" means the exponential weight in respect of Strategy Calculation Day *t* and Decision Date *d*, determined in accordance with the definition of "w(k,d)", provided that each reference to "Strategy Calculation Day *k*" is deemed to be a reference to "Strategy Calculation Day *t*".

3.   **Weight Capping Step**

If "Weight Capping" is specified to be "Not Applicable" in the Relevant Specifications Annex, or is not so specified, this Weight Capping Step shall not apply in respect of the GS Strategy.

If "Weight Capping" is specified to be "Applicable" in the Relevant Specifications Annex, on each Decision Date

d, the Strategy Sponsor will determine the Weight Output in respect of this Weight Capping Step and each Immediate Component *ic* in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if "Weight Capping Style" is specified as "Proportional" in the Relevant Specifications Annex, the Weight Output in respect of such Immediate Component *ic*, such Decision Date *d* and this Weight Capping Step shall be equal to the *product* of (I) the Weight Input in respect of such Immediate Component *ic*, such Decision Date *d* and this Weight Capping Step and (II) the Lowest Weight Multiplier in respect of such Decision Date *d*; or

(ii)   if "Weight Capping Style" is specified as "Independent" in the Relevant Specifications Annex, the Weight Output in respect of such Immediate Component *ic*, such Decision Date *d* and this Weight Capping Step shall be equal to the *product* of (I) the Weight Input in respect of such Immediate Component *ic*, such Decision Date *d* and this Weight Capping Step and (II) the Weight Multiplier in respect of such Immediate Component *ic* and such Decision Date *d*.

Where:

"**Lowest Weight Multiplier**" means, in respect of Decision Date *d*, the lowest Weight Multiplier in respect of all Immediate Components and such Decision Date; and

"**Weight Multiplier**" in respect of each Immediate Component *ic* and Decision Date *d* is determined in accordance with the following formula:

$$\mathrm{WM_{ic}(d)} = Min\left(\frac{\mathrm{ICWC_{ic}}}{\mathrm{ABS}\big(\mathrm{Weight\ Input_{ic}(d)}\big)}; 1\right)$$

Where:

"**ABS(x)**" means the absolute value of x;

"**ICWC_{ic}**" means the Immediate Component Weight Cap in respect of Immediate Component *ic*;

"**Immediate Component Weight Cap**" means, in respect of an Immediate Component, the number specified as such in the Relevant Specifications Annex.

"***Min***" followed by a series of amounts inside brackets, means whichever is the lesser of the amounts separated by a semi-colon insider those brackets;

"**Weight Input_{ic}(d)**" means the Weight Input in respect of Immediate Component *ic*, Decision Date *d* and this Weight Capping Step; and

"**WM_{ic}(d)**" means the Weight Multiplier in respect of Immediate Component *ic* and Decision Date *d*.

4.   Weight Rounding Step

If "Weight Rounding" is specified to be "Not Applicable" in the Relevant Specifications Annex, or is not so specified, or if the Weight Rounding Increment is specified to be 0 in the Relevant Specifications Annex, this Weight Rounding Step shall not apply in respect of the GS Strategy.

If "Weight Rounding" is specified to be "Applicable" in the Relevant Specifications Annex, and if the Weight Rounding Increment if specified to be different from 0 in the Relevant Specifications Annex, the Strategy Sponsor will determine the Weight Output in respect of each Immediate Component *ic*, such Decision Date *d* and this Weight Rounding Step in accordance with the following formula:

$$\mathrm{Weight\ Output_{ic}(d)} = \mathrm{Round\ (Weight\ Input_{ic}(d); Weight\ Rounding\ Increment)}$$

Where:

"**Weight Input_{ic}(d)**" means the Weight Input in respect of Immediate Component *ic*, Decision Date *d* and this Weight Rounding Step;

"**Round(x;y)**" means an amount equal to *x* rounded to the nearest multiple of *y*, provided that if *x* is equi-distant to the two nearest multiples of *y*, then *x* shall be rounded to the nearest multiple of *y* which has the higher absolute value;

"**Weight Output_{ic}(d)**" means the Weight Output in respect of Immediate Component *ic*, Decision Date *d* and

this Weight Rounding Step; and

"**Weight Rounding Increment**" means the number specified as such in the Relevant Specifications Annex.

5.   Determination of the Immediate Component Weight

The "**Immediate Component Weight**" in respect of each Immediate Component *ic* and a Rebalancing Date *r* is determined by the Strategy Sponsor on the Decision Date *d* corresponding to such Rebalancing Date *r*, and will be equal to the Weight Output in respect of such Immediate Component *ic*, such Decision Date *d* and the immediately preceding step of this Section D: *Immediate Component Weight Determination Process* of this Commodity Risk Premia Methodology Description that is specified to be applicable in respect of the GS Strategy.

Section E: General Definitions

Terms not otherwise defined in this Commodity Risk Premia Methodology Description in respect of the GS Strategy shall have the meanings given to them below.

"**Daily Return**" means, in respect of an Immediate Component *ic* and Strategy Calculation Day *t*, the amount determined in accordance with the following formula:

$$\text{Rtn}_{ic}(t) = \frac{\text{Timely Level}_{ic}(t)}{\text{Timely Level}_{ic}(t-1)} - 1$$

Where:

"**Timely Level$_{ic}$(t)**" means the Timely Level in respect of Immediate Component *ic* on a Strategy Calculation Day *t*; and

"**Timely Level$_{ic}$(t-1)**" means the Timely Level in respect of Immediate Component *ic* on the Strategy Calculation Day immediately preceding Strategy Calculation Day *t*.

"**Decision Date**" means, in respect of each Reference Date and the Rebalancing Date corresponding to such Reference Date (and determined in relation to such Reference Date in accordance with the Decision Date Rule), the Strategy Calculation Day on which the Strategy Sponsor determines the Immediate Component Weight of each of the Immediate Components included in the GS Strategy for such Rebalancing Date.

"**Decision Date Rule**" means the rule used to determine the Decision Date in respect of each Reference Date (and the Rebalancing Date corresponding to such Reference Date), as specified in the Relevant Specifications Annex.

"**Eligible Immediate Component**" means, in respect of an Observation Date, each Immediate Component that satisfies (a) the conditions specified as "Eligibility Conditions" in the the Relevant Specifications Annex (if any) and (b) the definition of Eligible Immediate Component in each Relevant Signal Style Annex in respect of the GS Strategy, each determined as of such Observation Date, provided that if there is no definition of an Eligible Immediate Component in any Relevant Signal Style Annex, then each Immediate Component shall be deemed to satisfy the definition of Eligible Immediate Component in respect of such Relevant Signal Style Annex and each Observation Date.

"**General Basket Strategy Base Description**" shall have the meaning given to such term in paragraph 1 (*Introduction*) of Section A: *General* of this Commodity Risk Premia Methodology Description;

"**Immediate Component Weight Determination Process**" shall have the meaning given to such term in Section D: *Immediate Component Weight Determination Process* of this Commodity Risk Premia Methodology Description.

"**Individual Signal**" shall have the meaning given to such term in paragraph 2 (*Determination of the Individual Signal*) of Section B: *Determination of the Signal* of this Commodity Risk Premia Methodology Description.

"**Leverage Factor**" means the number specified as such in the Relevant Specifications Annex, or if not so specified, one (1).

"**N**" means, in respect of each of the following paragraphs of this Commodity Risk Premia Methodology Description, the meaning given to such term in such paragraph: paragraph 1 (*Determination of the Signal*) Section B: *Determination of the Signal,* paragraph 1.1 (*Cross-sectional Weight Method*) of Section C: *Preliminary Weight Determination Process* or in paragraph 2.2 (*Determination of Hypothetical Realised Volatility*) of Section D *Immediate Component Weight Determination Process* of this Commodity Risk Premia Methodology Description.

"**Number of Long Immediate Components**" means the number specified as such in the Relevant Specifications Annex.

"**Number of Observation Dates**" means, in respect of an Immediate Component, the number specified as such in the Relevant Specifications Annex – either specified as one single number for all Immediate Components, or in a table as one number per Immediate Component. If not so specified, the number assigned to all Immediate Components is one (1).

"**Number of Short Immediate Components**" means the number specified as such in the Relevant Specifications Annex.

"**Observation Dates**" means, in respect of an Immediate Component and a Decision Date *d*, the sequence of

consecutive Strategy Calculation Days equal to the Number of Observation Dates ending on, and including, Decision Date *d*.

"**Preliminary Weight**" shall have the meaning given to such term in paragraph 5 (*Determination of the Preliminary Weight*) of Section C: *Preliminary Weight Determination Process* of this Commodity Risk Premia Methodology Description.

"**Preliminary Weight Determination Process**" shall have the meaning given to such term in Section C: *Preliminary Weight Determination Process* of this Commodity Risk Premia Methodology Description.

"**Raw Signal**" shall have the meaning given to such term in Section B: *Determination of the Signal* of this Commodity Risk Premia Methodology Description.

"**Relevant Signal Style Annex**" means, in respect of a Signal Specification Set, the Signal Style Annex corresponding to the Signal Style specified in respect of such Signal Specification Set in the Relevant Specifications Annex.

"**Relevant Specifications Annex**" shall have the meaning given to such term in paragraph 1 (*Introduction*) of Section A: *General* of this Commodity Risk Premia Methodology Description.

"**Scaling Factor**" shall have the meaning given to such term in paragraph 2.1 (*Determination of the Scaling Factor*) of Section C: *Preliminary Weight Determination Process* of this Commodity Risk Premia Methodology Description.

"**Signal**" shall have the meaning given to such term in paragraph 1 (*Determination of the Signal*) of Section B: *Determination of the Signal* of this Commodity Risk Premia Methodology Description.

"**Signal Adjust Method**" means, in respect of an Eligible Immediate Component, the method that the GS Strategy utilises to determine the Signal in respect of such Eligible Immediate Component (in accordance with Section B: *Determination of the Signal* of this Commodity Risk Premia Methodology Description and the Relevant Signal Style Annex) as specified in the Relevant Specifications Annex.

"**Signal Rank**" means, in respect of an Immediate Component and an Observation Date, the rank of such Immediate Component relative to all the other Immediate Components included in the GS Strategy according to the Signal in respect each such Immediate Component and such of Observation Date, as determined in accordance with paragraph 1.1 (*Cross-sectional Weight Method*) of Section C: *Preliminary Weight Determination Process* of this Commodity Risk Premia Methodology Description.

"**Signal Style Annex**" means each Annex to this Commodity Risk Premia Methodology Description, each of which is required to calculate the Raw Signal in respect of a specific "Signal Style".

"**Signal Weight**" means, if "Signal Adjust Method" is specified to be "Weighted Average" in the Relevant Specifications Annex, the number specified as such in respect of each Signal Specification Set in the Relevant Specifications Annex.

"**Signal Specification Set**" means each signal specification set specified in the Relevant Specifications Annex, each being a set of parameters required to be able to calculate the Individual Signal in respect of such Signal Specification Set and each Eligible Immediate Component, provided that if no Signal Specification Set is specified in the Relevant Specifications Annex there will be deemed to be one Signal Specification Set in respect of the GS Strategy and such Signal Specification Set shall be the parameters specified in the Relevant Specifications Annex that are required to be able to calculate the Individual Signal in respect of each Eligible Immediate Component and such GS Strategy.

"**Signal Style**" means, in respect of a Signal Specification Set, the method that the GS Strategy utilises to determine the Raw Signal in respect of such Signal Specification Set (in accordance with Section B: *Determination of the Signal* of this Commodity Risk Premia Methodology Description and the Relevant Signal Style Annex) as specified in the Relevant Specifications Annex.

"**Target Weight**" means, in respect of an Eligible Immediate Component and an Observation Date, as determined in accordance (i), (ii) or (iii) below (as applicable):

(i) if "Target Weights" is specified to be "Applicable" in the Relevant Specifications Annex or is not so specified, the Target Weight in respect of such Eligible Immediate Component and such Observation Date shall be the number specified as the "Target Weight" in respect of such Eligible Immediate Component in the Relevant Specifications Annex;

(ii) if "Target Weights" is specified to be "Not Applicable" in the Relevant Specifications Annex and "Normalize Weights" is specified to be "Applicable" in the Relevant Specifications Annex or is not so

specified, the Target Weight in respect of such Eligible Immediate Component and such Observation Date shall be equal the *quotient* of (a) one (1) *divided* by (b) the total number of Eligible Immediate Components in respect of such Observation Date; or

(iii)   if "Target Weights is specified to be "Not Applicable" in the Relevant Specifications Annex and "Normalize Weights" is specified to be "Not Applicable" in the Relevant Specifications Annex, the Target Weight in respect of such Eligible Immediate Component and such Observation Date shall be one (1).

"**Weight Adjusting Factor**" shall have the meaning given to such term in paragraph 4 (*Weight Adjusting Step*) of Section C: Preliminary Weight Determination Process of this Commodity Risk Premia Methodology Description.

"**Weight Input**" means, in respect of:

(i)   an Eligible Immediate Component, an Observation Date and a step in the Preliminary Weight Determination Process (other than the first step), the Weight Output in respect of such Eligible Immediate Component, such Observation Date and the immediately preceding step of the Preliminary Weight Determination Process that is specified to be applicable in respect of the GS Strategy; and

(ii)   an Immediate Component, a Decision Date and a step in the Immediate Component Weight Determination Process (other than the first step), the Weight Output in respect of such Immediate Component, such Decision Date and the immediately preceding step of the Immediate Component Weight Determination Process that is specified to be applicable in respect of the GS Strategy.

"**Weight Output**" means, in respect of:

(i)   an Eligible Immediate Component, an Observation Date and a step in the Preliminary Weight Determination Process (other than the final step), the value determined by applying such step to the Weight Input in respect of such Eligible Immediate Component, such Observation Date and such step. The Weight Output in respect of the final step of the Preliminary Weight Determination Process shall be the Preliminary Weight in respect of such Immediate Component and such Observation Date; and

(i)   an Immediate Component, a Decision Date and a step in the Immediate Component Weight Determination Process (other than the final step), the value determined by applying such step to the Weight Input in respect of such Immediate Component, such Decision Date and such step. The Weight Output in respect of the final step of the Immediate Component Weight Determination Process shall be the Immediate Component Weight in respect of such Immediate Component and the Rebalancing Date corresponding to such Decision Date.

"**Weight Mapping Table**" means, if "Weight Mapping" is specified to be Applicable in the Relevant Specifications Annex, the table specified as such in the Relevant Specifications Annex.

*Each of "**Contract Expiration**", "**Daily Contract Reference Price**", "**Futures Contract**", "**GS Strategy**", "**Immediate Component**", "**Rebalancing Date**", "**Strategy Calculation Day**", "**Strategy Publication Data Source**", "**Strategy Rules**", "**Strategy Sponsor**", "**Timely Level**" and "**Trading Facility**" shall have the meaning given to such term in the General Basket Strategy Base Description.*

Signal Style Annex: Carry Signal Style Annex

If the "Signal Style" in respect of a Signal Specification Set (for the purposes of this Carry Signal Style Annex, the "**Relevant Signal Specification Set**") is specified as "Carry" in the Relevant Specifications Annex, the Raw Signal in respect of each Immediate Component an Observation Date and the Relevant Signal Specification Set shall be determined in accordance with the provisions set out in this Carry Signal Style Annex of this Commodity Risk Premia Methodology Description.

The Carry signal is determined by reference to (i) if such Immediate Component is a single commodity sub-index, the "Implied Carry" in respect of such Immediate Component, or (ii) if such Immediate Component is a basket consisting of single commodity sub-indices, the weighted sum of the "Implied Carry" in respect of each Single Commodity Sub-index included in such Immediate Component.

1.   Determination of the Raw Signal

The Strategy Sponsor will determine the Raw Signal in respect of such Immediate Component *ic*, the Relevant Signal Specification Set and such Observation Date *o* in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if Immediate Component *ic* is a Single Commodity Sub-index, then the Raw Signal will be equal to the Implied Carry in respect of such Single Commodity Sub-index and such Observation Date *o*; or

(ii)   if Immediate Component *ic* is not a Single Commodity Sub-index, then the Raw Signal will be equal to the weighted sum of the Raw Signal of each immediate component i of the Immediate Component *ic* (such immediate component i is called a "**Sub-component**"), as determined by the Strategy Sponsor in accordance with the following formula:

$$\text{Raw Signal}_{ic}(o) = \sum_{i} \text{Component Weight}_{ic}^{i}(o) \times \text{Raw Signal}_{ic}^{i}(o)$$

Where the summation over "**i**" is taken over each Sub-component included in Immediate Component *ic*, and:

"**Component Weight$_{ic}^{i}$(o)**" means, in respect of a Sub-component *i* included in Immediate Component *ic* and Observation Date *o*, the weight assigned to such Sub-component *i* in respect of such Immediate Component *ic* and such day (or if such day is not a Rebalancing Date for such Immediate Component *ic*, the weight assigned to such Sub-component *i* on the Rebalancing Date for such Immediate Component *ic* falling immediately prior to such day, as determined in accordance with the relevant rules in respect of such Immediate Component *ic*);

"**Raw Signal$_{ic}^{i}$(o)**" means the Raw Signal in respect of Sub-component *i* included in Immediate Component *ic* on Observation Date *o*, determined in accordance with the rules set out in this Carry Signal Style Annex; and

"**Raw Signal$_{ic}$(o)**" means the Raw Signal in respect of Immediate Component *ic* and Observation Date *o*.

2.   Calculation of the Implied Carry with respect to a Single Commodity Sub-Index

The Implied Carry in respect of a Single Commodity Sub-Index will be determined by the Strategy Sponsor in accordance with the rules set out in the following paragraphs for the relevant Secondary Contract Type as specified in the Relevant Specifications Annex for the Relevant Signal Specification Set.

2.1.   Calculation of the Implied Carry of a Single Commodity Sub-Index (Second Nearby Contract)

If "Secondary Contract Type" is specified as "Second Nearby Contract", or is not specified, the Implied Carry in respect of a Single Commodity Sub-Index on Observation Date *o* will be equal to the Backwardation Value of the Contract Pair consisting of the Primary Contract Expiration and the Secondary Contract Expiration on Observation Date *o*, where

"**Backwardation Value**" in respect of the Contract Pair consisting of the Primary Contract Expiration and the Secondary Contract Expiration on Observation Date *o* is determined in accordance with the formula set out in paragraph 3 of this Carry Signal Style Annex.

"**Primary Contract Expiration**" means, in respect of a Single Commodity Sub-index i and an Observation Date o, the Designated Contract Expiration with respect to the Futures Contract underlying Single Commodity Sub-index i which has the earliest Contract Month and in respect of which the Last Valid Day falls after Observation Date o; and

"**Secondary Contract Expiration**" means, in respect of a Single Commodity Sub-index i and an Observation Date o, the Designated Contract Expiration with respect to the Futures Contract underlying the Single Commodity Sub-index i which has the earliest Contract Month falling after the Contract Month of the Primary Contract Expiration.

2.2. Calculation of the Implied Carry of a Single Commodity Sub-Index (One Year Contract)

If "Secondary Contract Type" is specified as "One Year Contract", the Implied Carry in respect of a Single Commodity Sub-Index on Observation Date o will be equal to the Backwardation Value of the Contract Pair consisting of the Primary Contract Expiration and the Secondary Contract Expiration on Observation Date o, where

"**Backwardation Value**" in respect of the Contract Pair consisting of the Primary Contract Expiration and the Secondary Contract Expiration on Observation Date o is determined in accordance with the formula set out in paragraph 3 of this Carry Signal Style Annex;

"**Primary Contract Expiration**" means, in respect of a Single Commodity Sub-index i and an Observation Date o, the Designated Contract Expiration with respect to the Futures Contract underlying Single Commodity Sub-index i which has the earliest Contract Month and in respect of which the Last Valid Day falls after the Observation Date o;

"**Secondary Contract Expiration**" means, in respect of a Single Commodity Sub-index i and an Observation Date o, the Designated Contract Expiration with respect to the Futures Contract underlying a Single Commodity Sub-index i which (a) has the latest Contract Month which falls in the 12-month period commencing on, but excluding, the Contract Month of the Primary Contract Expiration and (b) the Daily Contract Reference Price in respect of such Futures Contract is published by the relevant Trading Facility and an Observation Date o;

2.3. Calculation of the Implied Carry of a Single Commodity Sub-Index (Roll Contract)

If "Secondary Contract Type" is specified as "Roll Contract", the Implied Carry in respect of a Single Commodity Sub-Index on Observation Date o will be calculated in accordance with the following formula:

$$\text{Implied Carry}_i(o) = \sum_c \text{Dollar Weight}_{i,c}(o) \times \text{Backwardation Value}_c(o)$$

Where the summation over "**c**" is taken over each Contract Expiration underlying Single Commodity Sub-Index i, and:

"**Backwardation Value$_c$(o)**" means the Backwardation Value in respect of the Contract Pair consisting of Contract Expiration c and its corresponding Comparison Contract Expiration on Observation Date o, calculated in accordance with the formula set out in paragraph 3 of this Carry Signal Style Annex;

"**Comparison Contract Expiration**" means, in respect of a Contract Expiration c and an Observation Date o, the Designated Contract Expiration, with respect to the same Futures Contract of Contract Expiration c, which has the latest Contract Month falling prior to the Contract Month of Contract Expiration c and the Last Valid Day of such Designated Contract Expiration falling after Observation Date o. If such Designated Contract Expiration does not exist, the Comparison Contract Expiration shall be the Designated Contract Expiration with the earliest Contract Month falling after the Contract Month of Contract Expiration c; and

"**Dollar Weight$_{i,c}$ (o)**" means the percentage weight of Contract Expiration c in Single Commodity Sub-Index i on Observation Date o, which is calculated as the ratio of (A) the product of (i) the number of units of Contract Expiration c included in one unit of Single Commodity Sub-Index i on Observation Date o, multiplied by (ii) the Daily Contract Reference Price of Contract Expiration c on Observation Date o, and divided by (B) the Timely Level of Single Commodity Sub-Index i on Observation Date o.

3. Calculation of the Backwardation Value of a Contract Pair

The Backwardation Value of a Contract Pair on Observation Date *o* is calculated by the Strategy Sponsor in accordance with the following formula:

$$\text{Backwardation Value}_{cp}(o) = \frac{\text{Price}_{SDC(cp)}(o) - \text{Price}_{LDC(cp)}(o)}{\text{Price}_{LDC(cp)}(o)} \times \frac{12}{\text{Number of Months}_{cp}}$$

Where,

"**SDC(cp)**" means the Short Dated Contract Expiration of Contract Pair *cp*, which is the Contract Expiration that has the earlier Contract Month among the two Contract Expirations included in Contract Pair *cp*;

"**LDC(cp)**" means the Long Dated Contract Expiration of Contract Pair *cp*, which is the Contract Expiration that has the later Contract Month among the two Contract Expirations included in Contract Pair *cp*;

"**Number of Months$_{cp}$**" means the number of calendar months in the period commencing on, but excluding, the Contract Month of the Short Dated Contract Expiration in respect of Contract Pair *cp*, and including, the Contract Month of the Long Dated Contract Expiration in respect of Contract Pair *cp*; and

"**Price$_x$(o)**" means the Daily Contract Reference Price of Contract Expiration *x* on Observation Date *o*.

4. Definitions

"**Contract Month**" means, in respect of a Designated Contract Expiration, the calendar month specified in respect of such Designated Contract Expiration;

"**Contract Pair**" means a set of two distinct Contract Expirations with respect to the same Futures Contract;

"**Designated Contract Expiration**" means, in respect of a Futures Contract, each of the Contract Expirations corresponding to such Futures Contract set out in the Relevant Specifications Annex;

"**Last Trading Date**" means, in respect of a Designated Contract Expiration, the last day on which such Designated Contract Expiration can be traded on the relevant Trading Facility, as determined and announced by such Trading Facility for such Designated Contract Expiration; and

"**Last Valid Day**" means, in respect of a Designated Contract Expiration:

(i)   if the "Observation Methodology" is specified as "Observable" in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, the Last Trading Date of such Designated Contract Expiration; or

(ii)   if the "Observation Methodology" is specified as "Tradable" in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, the earlier of (a) the Last Trading Date of such Designated Contract Expiration and (b) the first calendar day of the Contract Month of such Designated Contract Expiration.

"**Single Commodity Sub-index**" means a commodity index reflecting exposure to the Contract Expirations of a Futures Contract on a single commodity, which could be a third party index or a Goldman Sachs proprietary strategy, basket or index.

Signal Style Annex: Exponential Trend Signal Style Annex

If the "Signal Style" is specified as "Exponential Trend" in respect of in respect of a Signal Specification Set (for the purposes of this Exponential Trend Signal Style Annex, the "**Relevant Signal Specification Set**") in the Relevant Specifications Annex, the Raw Signal in respect of each Immediate Component, an Observation Date and the Relevant Signal Specification Set shall be determined in accordance with the provisions set out in this Exponential Trend Signal Style Annex of this Commodity Risk Premia Methodology Description.

The Exponential Trend signal is determined by reference to the exponentially weighted sum of daily returns in respect of an Immediate Component over each day included in a specified performance lookback period.

On each Observation Date o, the Strategy Sponsor will determine the Raw Signal in respect of each Immediate Component ic, the Relevant Signal Specification Set and such Observation Date o in accordance with the following formula:

$$\text{Raw Signal}_{ic}(o) = \frac{\sum_{t=PLD(o)}^{o} \text{Rtn}_{ic}(t) \times (1-\alpha)^{N(t,o)}}{\sum_{t=PLD(o)}^{o}(1-\alpha)^{N(t,o)}} \times 252$$

Where the summation over "t" is taken over each Strategy Calculation Day falling in the period commencing on, and including, PLD(o) and ending on, and including, Observation Date o, and:

"**Exponential Smoothing Factor**" means, in respect of a Relevant Signal Specification Set, the number specified as such in the Relevant Specifications Annex.

"**N(t,o)**" means the number of Strategy Calculation Days falling in the period commencing on, and including, Strategy Calculation Day t and ending on, but excluding, Observation Date o;

"**Performance Lookback Date**" means the date determined in respect of an Observation Date by applying the Performance Lookback Rule to such Observation Date;

"**Performance Lookback Rule**" means the rule used to determine the Performance Lookback Date in respect of an Observation Date, as specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"**PLD(o)**" means the Performance Lookback Date in respect of Observation Date o;

"**Raw Signal$_{ic}$(o)**" means the Raw Signal in respect of Immediate Component ic and Observation Date o;

"**Rtn$_{ic}$(t)**" means the Daily Return in respect of Immediate Component ic and Strategy Calculation Day t; and

"**α**" means the Exponential Smoothing Factor as specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex.

Signal Style Annex: Point-to-point Trend Signal Style Annex

If the "Signal Style" is specified as "Point-to-point Trend" in respect of a Signal Specification Set (for the purposes of this Point-to-point Trend Signal Style Annex, the "**Relevant Signal Specification Set**") in the Relevant Specifications Annex, the Raw Signal in respect of each Immediate Component, an Observation Date and the Relevant Signal Specification Set shall be determined in accordance with the provisions set out in this Point-to-point Trend Signal Style Annex of this Commodity Risk Premia Methodology Description.

The Point-to-point Trend signal is determined by reference to the percentage increase or decrease in the level of an Immediate Component over a specified performance lookback period.

On each Observation Date o, the Strategy Sponsor will determine the Raw Signal in respect of each Immediate Component ic, the Relevant Signal Specification Set and such Observation Date o in accordance with the following formula:

$$\text{Raw Signal}_{ic}(o) = \frac{\text{Timely Level}_{ic}(o)}{\text{Timely Level}_{ic}(\text{PLD}(o))} - 1$$

Where:

"**Performance Lookback Date**" means the date determined in respect of an Observation Date by applying the Performance Lookback Rule to such Observation Date;

"**Performance Lookback Rule**" means the rule used to determine the Performance Lookback Date in respect of an Observation Date, as specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"**Raw Signal$_{ic}$(o)**" means the Raw Signal in respect of Immediate Component ic and Observation Date o;

"**Timely Level$_{ic}$(PLD(o))**" means the Timely Level in respect of Immediate Component ic on the Performance Lookback Date in respect of Observation Date o; and

"**Timely Level$_{ic}$(o)**" means the Timely Level in respect of Immediate Component ic on Observation Date o.

Signal Style Annex: COT Signal Style Annex

If the "Signal Style" is specified as "COT" in respect of a Signal Specification Set (for the purposes of this COT Signal Style Annex, the "**Relevant Signal Specification Set**") in the Relevant Specifications Annex, the Raw Signal in respect of each Immediate Component, an Observation Date and the Relevant Signal Specification Set shall be determined in accordance with the provisions set out in this COT Signal Style Annex of this Commodity Risk Premia Methodology Description.

The COT signal is determined by reference to the net "open interest position" held by speculators in the commodity futures contract linked to each Immediate Component and utilises certain data published by the U.S. Commodity Futures Trading Commission in its weekly "Commitment of Traders (COT)" reports in order to calculate such net "open interest position".

On each Observation Date o, the Strategy Sponsor will determine the Raw Signal in respect of each Immediate Component ic, the Relevant Signal Specification Set and such Observation Date o in accordance with the following formula:

$$\text{Raw Signal}_{ic}(o) = \text{Multiplier} \times \frac{\text{Net Spec}_{ic}^{\text{Cur}}(o) - \text{Net Spec}_{ic}^{\text{Offset}}(o)}{\text{Net Spec}_{ic}^{\text{Max}}(o) - \text{Net Spec}_{ic}^{\text{Min}}(o)}$$

Where:

"**Aggregated Commitments of Traders report**" shall have the meaning given to such term in the definition of "Commercial Long (All) Position" in this COT Signal Style Annex of this Commodity Risk Premia Methodology Description;

"**CFTC**" means the U.S. Commodity Futures Trading Commission;

"**Commercial Long (All) Position**" means, in respect of an Immediate Component and a Reported OI Day, the number specified in the column entitled "Commercial Long (All)" in the COT Report in respect of such Immediate Component as of such Reported OI Day. The "Commercial Long (All)" position reflects the current "long open interest" positions held by those traders classified by the CFTC as commercial participants (such as producers or consumers of commodities) as of a particular date, and is published under the section "Options and Futures Combined" in the "Legacy Commitments of Traders report" (also known as the "**Aggregated Commitments of Traders report**");

"**Commercial Short (All) Position**" means, in respect of an Immediate Component and a Reported OI Day, the number specified in the column entitled "Commercial Short (All)" in the COT Report in respect of such Immediate Component as of such Reported OI Day. The "Commercial Short (All)" position reflects the current "short open interest" positions held by those traders classified by the CFTC as commercial participants (such as producers or consumers of commodities) as of a particular date, and is published under the section "Options and Futures Combined" in the Aggregated Commitments of Traders report;

"**Commitment of Traders (COT) Report**" or "**COT Report**" means in respect of an Immediate Component, the Commitment of Traders ("**COT**") report published by the CFTC in respect of the Futures Contract to which such Immediate Component is linked (such Futures Contract, the "**Reference Futures Contract**" in respect of such Immediate Component, as specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex) and the "open interest" for such Futures Contract as of a particular day (currently expected to be each Tuesday) (such day, a "**Reported OI Day**") and which is scheduled to be made available on the Friday immediately following the Reported OI Day of the same week on the CFTC's website;

"**Lookback Date**" means, in respect of an Observation Date, the date determined by applying the Lookback Rule to such Observation Date;

"**Lookback Period**" means, in respect of an Observation Date, the period commencing on, and including, the Lookback Date in respect of such Observation Date and ending on, and including, the Friday immediately preceding such Observation Date;

"**Lookback Rule**" means the rule used to determine the Lookback Date in respect of an Observation Date, as specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"**Multiplier**" means:

(i)   if "Inverse Signal" is specified to be "Not Applicable" in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, one (1); or

(ii)   if "Inverse Signal" is specified to be "Applicable" in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, or if not so specified, *minus* one (-1);

"**Net Spec Position**" means, in respect of an Immediate Component *ic* and a Reported OI Day, the *product* of (i) *minus* one (-1), *multiplied* by (ii) the Commercial Long (All) Position in respect of such Immediate Component and such Reported OI Day *minus* the Commercial Short (All) Position in respect of such Immediate Component and such Reported OI Day;

"**Net Spec$_{ic}^{Cur}$(o)**" means, in respect of Immediate Component *ic* and Observation Date *o*, the Net Spec Position in respect of the Reported OI Day falling on or immediately prior to the Friday immediately preceding Observation Date *o* or, if the COT Report as of such Reported OI Day has not been published by the CFTC as of Observation Date *o*, then the immediately preceding Reported OI Day in respect of which a COT Report has been published;

"**Net Spec$_{ic}^{Max}$(o)**" means the highest value of the Net Spec Position in respect of Immediate Component *ic* and each Reported OI Day falling in the Lookback Period in respect of Observation Date *o* and in respect of which a COT Report in respect of Immediate Component *ic* has been published as of Observation Date *o*;

"**Net Spec$_{ic}^{Min}$(o)**" means the lowest value of the Net Spec Position in respect of Immediate Component *ic* and each Reported OI Day falling in the Lookback Period in respect of Observation Date *o* and in respect of which a COT Report in respect of Immediate Component *ic* has been published as of Observation Date *o*;

"**Net Spec$_{ic}^{Offset}$(o)**" means, in respect of Immediate Component *ic* and Observation Date *o*;

(i)   if the "Net Spec Offset" specified as "Mid" in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, or if not so specified, the arithmetic average of Net Spec$_{ic}^{Min}$(o) and Net Spec$_{ic}^{Max}$(o);

(ii)   if the "Net Spec Offset" is specified as "Average" in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, the arithmetic average of the Net Spec Position in respect of Immediate Component *ic* and each Reported OI Day falling in the Lookback Period in respect of Observation Date *o* and in respect of which a COT Report in respect of Immediate Component *ic* has been published as of Observation Date *o*; and

(iii)   if the "Net Spec Offset" is specified as "Median" in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, the median of the Net Spec Position in respect of Immediate Component *ic* and each Reported OI Day falling in the Lookback Period in respect of Observation Date *o* and in respect of which a COT Report in respect of Immediate Component *ic* has been published as of Observation Date *o*;

"**Raw Signal$_{ic}$(o)**" means the Raw Signal in respect of Immediate Component ic and Observation Date *o*;

"**Reference Futures Contract**", in respect of an Immediate Component, shall have the meaning given to such term in the definition of "Commitment of Traders (COT) Report" in this COT Signal Style Annex of this Commodity Risk Premia Methodology Description;

and

"**Reported OI Day**" shall have the meaning given to such term in the definition of "Commitment of Traders (COT) Report" in this COT Signal Style Annex of this Commodity Risk Premia Methodology Description.

Signal Style Annex: SAGE Signal Style Annex

If the "Signal Style" is specified as "SAGE" in respect of a Signal Specification Set (for the purposes of this SAGE Signal Style Annex, the "**Relevant Signal Specification Set**") in the Relevant Specifications Annex, the Raw Signal in respect of each Eligible Immediate Component, an Observation Date and the Relevant Signal Specification Set shall be determined in accordance with the provisions set out in this SAGE Signal Style Annex of this Commodity Risk Premia Methodology Description.

The SAGE signal is determined by reference to the "**Correlation Coefficient**" in respect of an Immediate Component, which measures the degree of correlation between two different series: (i) a series recording the cumulative historical daily natural logarithmic returns of such Immediate Component over a specified seasonal window in each calendar year falling in a specified historical lookback period, and (ii) a series of consecutive increasing natural numbers starting from one and with the same number of data points as the series referred to in (a) above.

1. Determination of the Cumulative Return Series of an Eligible Immediate Component

On each Observation Date o, the Strategy Sponsor will determine a series (a "**Cumulative Return Series**" or "**Cumulative Return Series$_{ic}^{o}$**") for each Eligible Immediate Component ic comprising all the Cumulative Daily Returns in respect of each Strategy Calculation Day (such day, "**Strategy Calculation Day j**") falling in the Seasonal Window Lookback Period for such Eligible Immediate Component ic and Observation Date o. For the avoidance of doubt, each Cumulative Daily Return (also known as a "data point") included in a Cumulative Return Series shall be recorded sequentially in time.

Where:

"**Cumulative Daily Return**" or "**Cumulative Daily Return$_{ic}^{o}$(j)**" in respect of each Strategy Calculation Day j for such Eligible Immediate Component ic and Observation Date o, shall be calculated in accordance with the following formula:

$$\text{Cumulative Daily Return}_{ic}^{o}(j) = \sum_{t}^{j} \text{Ln}\left(\frac{\text{Timely Level}_{ic}(t)}{\text{Timely Level}_{ic}(t-1)}\right)$$

Where the summation over "**t**" is taken over each Strategy Calculation Day falling in the Seasonal Window Lookback Period commencing on, and including, the first Strategy Calculation Day falling in the Seasonal Window Lookback Period in respect of Eligible Immediate Component ic and Observation Date o and ending on, and including, Strategy Calculation Day j, and:

"**Eligible Immediate Component**" means, in respect of an Observation Date o, each component specified as an Immediate Component in the Relevant Specifications Annex which satisfies the following criteria: the Seasonal Window Lookback Period in respect of such Immediate Component and such Observation Date must comprise at least 5 consecutive Seasonal Windows;

"**Equivalent Observation Date**" means, in respect of an Observation Date and each calendar year, the day falling on the same day and month as such Observation Date in such calendar year, provided that if such Observation Date falls on 29 February of a leap year or 28 February of a non-leap year, the Equivalent Observation Date in such calendar year shall be the last calendar day of February in such calendar year;

"**Immediate Component Start Date$_{ic}$**" means the Immediate Component Start Date in respect of Immediate Component ic as specified in respect of the Relevant Signal Specification Set in the Relevant Specification Annex;

"**Initial Equivalent Observation Date(o)**" means, in respect of Observation Date o, the date determined by applying the Seasonal Window Lookback Rule to such Observation Date (and such date shall be deemed to be an Equivalent Observation Date);

"**Initial Seasonal Window**" or "**Initial Seasonal Window$_{ic}$(o)**" means, in respect of Immediate Component ic and Observation Date o:

(i) if no Seasonal Window Lookback Rule is specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, the Seasonal Window commencing in the calendar year in which Immediate Component Start Date$_{ic}$ falls, provided that if Immediate Component Start Date$_{ic}$ falls on or after the Seasonal Window Start Date of such Seasonal Window, then "Initial Seasonal Window$_{ic}$(o)" shall be deemed to be the Seasonal Window commencing in the immediately following calendar year; or

(ii) if a Seasonal Window Lookback Rule is specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex, the Seasonal Window in respect of the Initial Equivalent Observation Date(o), provided that if Immediate Component Start Date$_{ic}$ falls on or after the Seasonal Window Start Date of such Seasonal Window, then "Initial Seasonal Window$_{ic}$(o)" shall be deemed to be the first Seasonal Window for which the Seasonal Window Start Date does not fall prior to or on Immediate Component Start Date$_{ic}$;

"**Ln(x)**" means the natural logarithm function evaluated for the number *x*;

"**Seasonal Window**" means, in respect of an Immediate Component and the Equivalent Observation Date in a calendar year, the period commencing from, and including, the Seasonal Window Start Date corresponding to such Equivalent Observation Date and ending on, and including, the Seasonal Window End Date corresponding to such Equivalent Observation Date;

"**Seasonal Window End Date**" shall have the meaning given to such term in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"**Seasonal Window Lookback Period**" or "**Seasonal Window Lookback Period$_{ic}$(o)**" means, in respect of Immediate Component *ic* and Observation Date *o*, the Initial Seasonal Window$_{ic}$(o) and each consecutive Seasonal Window thereafter up to, and including, the Seasonal Window in respect of which the Equivalent Observation Date falls in the calendar year immediately preceding the calendar year in which Observation Date *o* falls. For the avoidance of doubt, a Seasonal Window Lookback Period shall comprise only consecutive Seasonal Windows falling wholly in such Seasonal Window Lookback Period;

"**Seasonal Window Lookback Rule**" means the rule used to determine the Initial Equivalent Observation Date in respect of an Observation Date, as specified in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"**Seasonal Window Start Date**" shall have the meaning given to such term in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"**Timely Level$_{ic}$(t)**" means the Timely Level in respect of Immediate Component *ic* on Strategy Calculation Day *t*; and

"**Timely Level$_{ic}$(t-1)**" means the Timely Level in respect of Immediate Component *ic* on the Strategy Calculation Day immediately preceding Strategy Calculation Day *t*.

2. Determination of the Raw Signal

On each Observation Date *o*, the Strategy Sponsor will determine the Raw Signal in respect of each Eligible Immediate Component *ic*, the Relevant Signal Specification Set and such Observation Date *o* in accordance with the following formula:

$$\text{Raw Signal}_{ic}(o) = \text{Correl}(x_{ic}^o, y_{ic}^o)$$

Where:

"**Correl(x,y)**" is a number (between -1 and +1) that measures the degree of correlation between two series, series x and series y (each with a total number of data points equal to n) and is calculated in accordance with the following formula:

$$\text{Correl}(x, y) = \frac{n \sum_{i=1}^{n} x_i y_i - \sum_{i=1}^{n} x_i \sum_{i=1}^{n} y_i}{\sqrt{n \sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i)^2} \sqrt{n \sum_{i=1}^{n} y_i^2 - (\sum_{i=1}^{n} y_i)^2}}$$

"**n**" means the total number of data points in Cumulative Return Series$_o^{ic}$;

"**Raw Signal$_{ic}$(o)**" means the Raw Signal in respect of Immediate Component ic and Observation Date *o*; and

"**x_{ic}^o**" means Cumulative Return Series$_{ic}^o$; and

"**y_{ic}^o**" means a series of consecutive increasing natural numbers from 1 to n.

Signal Style Annex: Seasonality Adjustment Style Annex

If the "Signal Style" in respect of a Signal Specification Set (for the purposes of this Seasonality Adjustment Style Annex, the "**Relevant Signal Specification Set**") is specified as "Seasonality Adjustment" in the Relevant Specifications Annex, the Raw Signal in respect of each Immediate Component an Observation Date and the Relevant Signal Specification Set shall be determined in accordance with the provisions set out in this Seasonality Adjustment Style Annex of this Commodity Risk Premia Methodology Description.

The Seasonality Adjustment signal is determined by reference to an Immediate Component and an "Input Signal", which is determined independently for the "Input Signal Style" specified in the Signal Specification Set and in accordance with the rules of the Individual Signal set out in this Commodity Risk Premia Methodology Description and the corresponding Signal Style annex of such Input Signal Style. The Raw Signal in respect of an Immediate Component will be determined by the Strategy Sponsor in accordance with the rules set out in the following paragraphs for the relevant Adjustment Flag as specified in the Relevant Specifications Annex for the Relevant Signal Specification Set.

Determination of the Raw Signal

If the Adjustment Flag in respect of an Immediate Component, as specified in the Relevant Specifications Annex for the Relevant Signal Specification Set, is set to "No", then the Raw Signal will be equal to the Input Signal with respect to such Immediate Component and Observation Date o.

Otherwise, if the Adjustment Flag in respect of an Immediate Component, as specified in the Relevant Specifications Annex for the Relevant Signal Specification Set, is set to "Yes", then the Raw Signal will be calculated as:

$$\text{Raw Signal}_{ic}(o) = (\text{Input Signal}_{ic}(o) - \text{SA}_{ic}(o)) \times \text{Mult}_{ic}(o) + \text{YA}_{ic}(o) \times \text{AddFlag}_{ic}$$

Where:

"$\textbf{AddFlag}_{ic}$" shall be set to 1 if "Yearly Average Addition" is specified as "Yes" in respect of the Immediate Component ic in the Relevant Specifications Annex, or 0 if it is set to "No";

"**Equivalent Observation Date**" means, in respect of an Observation Date and each calendar year, the day falling on the same day and month as such Observation Date in such calendar year, provided that if such Observation Date falls on 29 February of a leap year or 28 February of a non-leap year, the Equivalent Observation Date in such calendar year shall be the last calendar day of February in such calendar year;

"$\textbf{Input Signal}_{ic}(o)$" means, with respect to an Immediate Component ic, the value of such Input Signal on Observation Date o as determined in accordance with the relevant Signal Style Annex corresponding to the Signal Specification Set of such Input Signal;

"**Min(a, b)**" means a function returning the lower among numbers a and b;

"$\textbf{Mult}_{ic}(o)$" means a factor with respect to Immediate Component ic and Observation Date o and calculated as:

   (i) If "Multiplier Adjustment" is specified as "Yes" in respect of the Immediate Component ic in the Relevant Specifications Annex or not specified,

$$\text{Mult}_{ic}(o) = \text{Min}\left(1, \frac{\text{YV}_{ic}(o)}{\text{SV}_{ic}(o)}\right)$$

   (ii) If "Multiplier Adjustment" is specified as "No" in respect of the Immediate Component ic in the Relevant Specifications Annex, one (1).

"**Number Of Lookback Years**" means a number as specified in the Relevant Specifications Annex;

"$\textbf{SA}_{ic}(o)$" means the seasonal average with respect to Immediate Component ic and Observation Date o and calculated as the arithmetic average of the Input Signals with respect to Immediate Component ic of each Seasonal Lookback Days(o);

"**Seasonal Window(o)**" means, for each calendar year the period starting from, and including, the Seasonal Window Start Date with respect to Observation Date *o* and such calendar year, to, and including, the Seasonal Window End Date with respect to Observation Date *o* and such calendar year*;*

"**Seasonal Lookback Days(o)**" means, with respect to Observation Date *o,* each Strategy Calculation Day falling in any Seasonal Window(o) in the Lookback Window(o);

"**Standard Deviation**" means a function with respect to a group of numbers *G,* and is calculated as:

$$\text{Standard Deviation(G)} = \sqrt{\frac{1}{N-1} \times \sum_{g \in G}(g - \bar{g})^2}$$

Where N is the number of components g within G, $\bar{g}$ is the arithmetical average of such components g, and the summation is taken over each component g included in G;

"**Seasonal Window Start Date**" shall have the meaning given to such term in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"**Seasonal Window End Date**" shall have the meaning given to such term in respect of the Relevant Signal Specification Set in the Relevant Specifications Annex;

"$\text{SV}_{ic}(\text{o})$" means, with respect to Immediate Component *ic* and Observation Date *o*, the Standard Deviation of the Input Signals with respect to Immediate Component *ic* of each Seasonal Lookback Days(o);

"$\text{YA}_{ic}(\text{o})$" means the yearly average with respect to Immediate Component *ic* and Observation Date *o*, and calculated as the arithmetic average of the Input Signals with respect to Immediate Component *ic* of each Strategy Calculation Day falling in Lookback Window(o);

"**Lookback Window(o)**" means, with respect to Observation Date *o*, the period starting from, and including, Lookback Window Start(o), to, and including Lookback Window End(o).

"$\text{YV}_{ic}(\text{o})$" means, with respect to Immediate Component *ic* and Observation Date *o*, the Standard Deviation of the Input Signals with respect to Immediate Component *ic* of each Strategy Calculation Day falling in Lookback Window(o);

"**Lookback Window Start(o)**" means, with respect to Observation Date *o*, the calendar day that falls 182 days before the Equivalent Observation Date falling the Number Of Lookback Years before such Observation Date *o,* or, if such calendar day is not a Strategy Calculation Day, the Strategy Calculation Day immediately following such calendar day.

"**Lookback Window End(o)**" means, with respect to Observation Date *o*, the calendar day that falls 182 days after the Equivalent Observation Date falling 1 year before such Observation Date *o,* or, if such calendar day is not a Strategy Calculation Day, the Strategy Calculation Day immediately preceding such calendar day.

GOLDMAN SACHS COMMODITY STRATEGY 1133

OVERVIEW

Version 1.1

Dated: 18 June 2020

The information set out below is only an overview of the Goldman Sachs Commodity Strategy 1133 and must be read in conjunction with the Strategy Rules (as defined below). This overview is intended to highlight certain features of the Goldman Sachs Commodity Strategy 1133 and does not purport to be complete. It is summarised from, and is qualified in its entirety, by the actual Strategy Rules, which sets out the complete methodology of the Goldman Sachs Commodity Strategy 1133. Accordingly, this overview should be read as an introduction to the Strategy Rules.

1.   Relevant documentation elements

The Goldman Sachs Commodity Strategy 1133 (for the purposes of this overview, the "GS Strategy") is part of a group of synthetic rules-based proprietary indices which Goldman Sachs International or its successor(s) as strategy sponsor may create from time to time. The complete rules and methodology applicable to the GS Strategy (the "**Strategy Rules**") are set out in the following documentation elements:

(i)   the Specifications Annex – Goldman Sachs Commodity Strategy 1133 dated 18 June 2020 (or any successor version) (the " **Specifications Annex**");

(ii)   the Goldman Sachs General Basket Strategy Base Description dated 28 July 2017 (or any successor version) (the "**General Basket Strategy Base Description**");

(iii)   the Goldman Sachs General Index Provisions dated 15 June 2017 (or any successor version) (the "**General Index Provisions**").

The relationship between these documentation elements may be summarised as follows:

(i)   the General Basket Strategy Base Description explains how the size of the exposure (represented by the number of units) of each component (which may be an immediate component or a constituent part of an immediate component) to which the GS Strategy is exposed is determined, and in turn, how the level of the GS Strategy is determined as a function of the levels and the number of units of each component included in the GS Strategy on any day;

(ii)   the relevant Specifications Annex provides specific details relevant to the GS Strategy which are utilised in the provisions of the General Basket Strategy Base Description, such as the immediate components included in the GS Strategy, the rebalancing dates and the weight of each immediate component;

(iii)   the General Index Provisions provides information regarding risk factors, conflicts of interest, changes in methodology and disclaimers.

The foregoing summary of documentation elements is not intended to be exhaustive. Please see such documentation elements for more information.

For information on the components of the Goldman Sachs Commodity Strategy 1133, please refer to the relevant strategy rules and/or documentation in respect of such components.

2.   Objective

The GS Strategy seeks to reflect a notional investment in two components (each called an "**immediate component**" of the GS Strategy):

(i)   Enhanced Strategy CLE205 on the S&P GSCI Crude Oil (ER) (the "**Component A**"), which is a Goldman Sachs proprietary strategy; and

(ii)   Enhanced Strategy CLF1E205 on the S&P GSCI Crude Oil 1 Month Forward (ER) (the "**Component B**"), which is a Goldman Sachs proprietary strategy.

 The GS Strategy initially provides a positive notional exposure to the Component A and zero exposure to the Component B. Following the rebalancing on 20 May 2020 and prior to the rebalancing on 29 June 2020, the

strategy will provide a positive notional exposure to Component B and zero exposure to the Component A. Following the rebalancing on 29 June 2020, the strategy will provide a positive notional exposure to Component A and zero exposure to the Component B.

The value of the GS Strategy will increase if the value of the Immediate Component with positive exposure increases.

3.   Immediate component weights

The strategy sponsor will calculate the level of the GS Strategy on each business day on which the offices of Goldman, Sachs & Co. (an affiliate of the strategy sponsor) in New York City are open for business (these days are called "**strategy calculation days**"). The level of the GS Strategy will depend on the exposure of the GS Strategy to each immediate component.

In order to calculate the quantity of exposure to each immediate component (determined as a number of units called "**immediate units**"), the strategy sponsor will reference the weight (called the "**immediate component weight**") of each immediate component included in the GS Strategy. The strategy sponsor will determine the immediate units for each immediate component by reference to the immediate component weight and the levels of such immediate component and the GS Strategy observed on the strategy inception date, 20 May 2020 and 29 June 2020 (such day is called the "**reference date**"). The GS Strategy is rebalanced on such reference date (such day is called the "**rebalancing date**"), and the immediate component weight of each immediate component in respect of each rebalancing date is set out in the relevant Specifications Annex.

4.   Exposure of the GS Strategy to a terminal component

The GS Strategy provides exposure to each terminal component included in it (either as an immediate component or as a constituent part of an immediate component) by notionally entering into a position (which may be "long" or "short") in such terminal component. The exposure of the GS Strategy to each terminal component on each strategy calculation day (see paragraph 5 (*Calculation and publication of the strategy tradable level and strategy timely level of the GS Strategy*) below) is determined as follows:

(i)   Firstly, the strategy sponsor will determine the immediate units of exposure of the relevant GS Strategy to each immediate component as the sum of the exposure to such immediate component over each rebalancing date falling on or prior to such strategy calculation day, being in respect of each rebalancing date (such day, the "**relevant rebalancing date**"), the product of (a) its immediate component weight as of the relevant rebalancing date, multiplied by (b) the quotient of (I) the level of the relevant GS Strategy on the reference date in respect of the relevant rebalancing date, divided by (II) the level of such immediate component on such reference date, multiplied by (c) the quotient of (I) the number of fade-in days in respect of the relevant rebalancing date falling on or prior to such strategy calculation day minus the number of fade-out days in respect of the relevant rebalancing date falling on or prior to such strategy calculation day, divided by (II) the total number of fade-in days. In respect of any strategy calculation day and the relevant rebalancing date, if the final fade-out day in respect of the relevant rebalancing date falls on or prior to such strategy calculation day, the exposure of the relevant GS Strategy to each immediate component in respect of the relevant rebalancing date on such strategy calculation day shall be zero.

(ii)   Therefore, the exposure of the relevant GS Strategy to each immediate component on the last fade-in day in respect of the relevant rebalancing date, if expressed as a percentage of the level of such GS Strategy, will be approximately equal to the immediate component weight of such immediate component.

(iii)   The strategy sponsor will then determine the exposure of the GS Strategy to each terminal component as a quantity (called "**units**") equal to the aggregate of the exposure to such terminal component due to the exposure of each immediate component included in the GS Strategy to such terminal component. The exposure of the GS Strategy to a terminal component (for the purposes of this paragraph, the "**relevant terminal component**") due to the exposure of an immediate component (for the purposes of this paragraph, the "**relevant immediate component**") to the relevant terminal component is equal to the *product* of (a) the immediate units of the relevant immediate component, *multiplied* by (b) the units of the relevant terminal component included in the relevant immediate component, being (I) if the relevant immediate component is the relevant terminal component, one, (II) if the relevant terminal component is a constituent part of the relevant immediate component, the units of the relevant terminal component included in the relevant immediate component, as determined in accordance with the relevant strategy rules of the relevant immediate component, (III) otherwise, zero.

5.   Calculation and publication of the strategy tradable level and strategy timely level of the GS Strategy

The strategy sponsor will calculate the level (called the "**strategy tradable level**") of the GS Strategy on each

strategy calculation day, subject to adjustment for non-tradable events and adjustment events (see paragraph 6 (*Non-tradable events, market disruption events, adjustment events and consequences*) below).

The strategy tradable level of the GS Strategy on each strategy calculation day will be equal to (i) the strategy tradable level on the immediately preceding strategy calculation day, *plus* (ii) the aggregate of the daily mark-to-market change in value of the position in each terminal component included in the GS Strategy, *minus* (iii) the aggregate of the transaction costs associated with any changes in the positions of the terminal components included in the GS Strategy, *minus* (iv) the aggregate of the servicing costs in respect of the holding of the positions of the terminal components included in the GS Strategy, *minus* (v) the strategy servicing costs. The strategy tradable level of the GS Strategy will be floored at zero.

It should be noted that the transaction costs and the servicing costs associated with a terminal component will be calculated by reference to the transaction cost rates and the servicing cost rates respectively, as set out in the Strategy Rules. Unless the transaction cost rate and the servicing cost rate for each terminal component are specified to be zero, the transaction costs and the servicing costs will generally have the effect of reducing the level of the GS Strategy. The strategy servicing costs associated with the GS Strategy will be calculated by reference to the strategy servicing cost rate, as set out in the strategy rules. Unless the strategy servicing cost rate is specified to be zero, the strategy servicing costs will generally have the effect of reducing the level of the GS Strategy.

The transaction costs and the servicing costs are calculated by reference to pre-determined rates and do not necessarily reflect the actual transaction costs and servicing costs that would be incurred by an investor replicating the exposure to the terminal components by trading in such terminal components, which could be larger or smaller from time to time. The issuer of any financial product linked to the GS Strategy (or its affiliates) may benefit if the notional transaction costs or servicing costs embedded in the GS Strategy exceed the actual transaction costs or servicing costs that may be incurred by the issuer of such products (or its affiliates) in hedging transactions that may be entered into in respect of such financial products.

The value of the position in a terminal component on a strategy calculation day is equal to the *product* of (i) the relevant number of units of such terminal component included in the GS Strategy, and (ii) the tradable level of such terminal component on such strategy calculation day. The tradable level of a terminal component in respect of a strategy calculation day is (a) if no non-tradable event occurs on such strategy calculation day, the official closing level of such component as published by the relevant strategy sponsor, or (b) if a non-tradable event occurs on such strategy calculation day, the level of the component as determined in accordance with paragraph 6 (*Non-tradable events, market disruption events, adjustment events and consequences*) below.

The transaction costs for any component for which the position in such component in the GS Strategy is unchanged on such strategy calculation day will be equal to zero. The servicing costs for any component to which the GS Strategy has zero exposure on such strategy calculation day will be equal to zero.

The strategy sponsor will also calculate a level (called the "**strategy timely level**") of the GS Strategy in respect of each strategy calculation day. If no non-tradable event occurs in respect of any component on a strategy calculation day, the strategy timely level will be equal to the strategy tradable level on such strategy calculation day. If a non-tradable event occurs in respect of a component on a strategy calculation day, the strategy sponsor will calculate the strategy timely level of the GS Strategy using the same methodology for calculating the strategy tradable level, but using the official closing level of each component in place of its tradable level.

The strategy timely level of the GS Strategy for each strategy calculation day will be published on Bloomberg ticker ABGS1133 <Index>.

The strategy sponsor does not have any obligation to continue to publish, and can discontinue publication of, the GS Strategy at any time.

6. Non-tradable events, market disruption events, adjustment events and consequences

(i)   Non-tradable events

A non-tradable event occurs in respect of a component when a strategy calculation day is not a trading day for such component or a market disruption event occurs in respect of the relevant contract expiration (called the "**affected contract expiration**") or any other asset, instrument or rate (including, but not limited to, an option, exchange rate or interest rate) included in such component (or a terminal component included in such component) or used in the calculation of the level of such component (or a terminal component included in such component). If such component is a terminal component and one or more components are specified to be a "MDE linked component" in respect of such component, a non-tradable event will also occur in respect of such component if a market disruption event occurs in respect of one or more such MDE linked components on such strategy calculation day.

A market disruption event occurs in respect of a contract expiration when the price of such contract expiration has hit the daily upper or lower limit imposed by the relevant trading facility, the price for such contract expiration is not announced or published or there is a suspension of trading of such contract expiration.

A "trading day" for a component that is terminal component is a day which is (a) an exchange business day for the relevant version of any underlying commodity futures contract (called a "**contract expiration**") included in such component, (b) a day on which any other asset, instrument or rate (including, but not limited to, an option, exchange rate or interest rate) included in such component or used in the calculation of the level of such component is scheduled to be traded or published, as applicable, and (c) a day on which such component is scheduled to be published. A "trading day" for a component that is not a terminal component is a day which is a trading day for all the terminal components included in such component, and a day on which such component is scheduled to be published.

If a non-tradable event occurs on a strategy calculation day in respect of a component, the strategy sponsor will calculate the strategy tradable level of the GS Strategy using the tradable level of such component, which will be calculated by the strategy sponsor in accordance with the strategy rules of the relevant component, or if not so specified in the relevant strategy rules and no "MDE linked component" is specified in respect of such component, by following the formula for, and method of, calculating such component, using the price of the affected contract expiration on the next following strategy calculation day on which a non-tradable event does not exist. However, if a non-tradable event persists on each of the five strategy calculation days immediately following that strategy calculation day, then the strategy sponsor will determine the price for that affected contract expiration in a commercially reasonable manner. If one or more MDE linked components are specified in respect of such component and a non-tradable event occurs in respect of such component on a strategy calculation day, the tradable level of such component will be equal to the timely level of such component on the next following strategy calculation day on which a non-tradable event does not exist.

(ii)   Adjustment events

If a component is replaced by a successor strategy which is substantially similar or calculated in the same or a substantially similar manner, then such replacement strategy shall be deemed to be that component, and the strategy sponsor may make adjustments to the Strategy Rules as it determines to be necessary.

If (a) the relevant sponsor for a component makes a material change to the weighting or composition of, formula for, or method of calculating such component, or (b) fails to calculate the level of such component or such component has ceased to be calculated by the relevant sponsor, or (c) the strategy sponsor determines that the level of the component contains a manifest error, then the strategy sponsor will calculate the level of such component using the same formula for, and method of calculating the level of such component last in effect, or if it determines that any of the foregoing events could adversely affect the GS Strategy, it may elect to remove or replace such component from the GS Strategy and may make such adjustments to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary.

If any contract expiration included in a component (a) has ceased to be published by the relevant trading facility and has not been replaced by a successor, or (b) the strategy sponsor determines that there has been a material change in the content, composition or constitution of the relevant commodity futures contract and the commodity referenced by such commodity futures contract, or the formula for or method of calculating such contract expiration or the relevant commodity futures contract, or the terms of such contract expiration or the relevant commodity futures contract, or (c) has ceased (or will cease) to be a liquid, actively traded contract expiration that is generally available for trading, or has been the subject of a market disruption event for at least five consecutive strategy calculation days, or (c) will be terminated or delisted, then the strategy sponsor may elect to remove or replace the component linked to such contract expiration from the GS Strategy and may make such adjustments to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary.

If (a) any third party information or data used to determine any weight(s), signal(s) or other input used in the calculation of the GS Strategy ceases to be published, or (b) there is a material change to the formula for or method of calculating, or the content or frequency of publication of such third party information or data, or (c) such third party information or data is not published for an extended period of time, then the strategy sponsor may (I) elect to remove or replace or assign a zero weight to the component(s) affected by such event from the GS Strategy, or (II) use comparable information or data from an alternative data source, or (III) make such adjustments to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary, or (IV) if the strategy sponsor determines that none of the above adjustment(s) would achieve a commercially reasonable result and/or that it is no longer possible or practicable to calculate the GS Strategy, terminate the GS Strategy without notice.

7.   Determinations and calculations

Unless otherwise specified, the strategy sponsor will make all determinations and calculations, in its discretion

and acting in a commercially reasonable manner, by reference to such factors as it deems appropriate, and such determinations and calculations will (in the absence of manifest error) be final, conclusive and binding. The strategy sponsor shall not have any responsibility to any person for any errors or omissions in any determination or calculation or owe any fiduciary duties to any person.

8. Overview of conflicts of interest

Goldman Sachs has multiple roles in connection with the GS Strategy, which include (i) calculating and publishing the strategy timely level and making certain determinations, and (ii) engaging in a range of activities in its business as a full service financial services group which could affect the value of the GS Strategy or a component included in the GS Strategy. In such capacities, it has the power to make determinations that could materially affect the value of the GS Strategy.

The information set out in the preceding sections is only a high-level summary of the key features, and conflicts of interest of the GS Strategy, and is intended to give, and will only give, an investor a basic understanding of how the GS Strategy works.

BEFORE INVESTORS INVEST IN ANY PRODUCT LINKED TO THE GS STRATEGY, THEY MUST READ THE STRATEGY RULES SETTING OUT THE COMPLETE METHODOLOGY, ADJUSTMENTS AND CONFLICTS OF INTEREST APPLICABLE TO THE GS STRATEGY, COPIES OF WHICH WILL BE PROVIDED ON REQUEST BY ANY INVESTOR IN ANY FINANCIAL PRODUCT LINKED TO THE GS STRATEGY. IN PARTICULAR, AN INVESTOR MUST PAY PARTICULAR ATTENTION TO THE CONFLICTS OF INTEREST APPLICABLE TO THE GS STRATEGY SET OUT IN THE STRATEGY RULES.

Specifications Annex – Goldman Sachs Commodity Strategy 1133

Dated: 18 June 2020

1. Introduction

This Specifications Annex, as may be amended from time to time constitutes the Relevant General Strategy Description for the purposes of the Goldman Sachs General Basket Strategy Base Description (the "**General Basket Strategy Base Description**"), and utilises the methodology set out therein to calculate the level of the GS Strategy identified in paragraph 2 (*Strategy Specifications*) below. This Specifications Annex sets out certain information required to complete the General Basket Strategy Base Description as well as certain other rules, methodology, definitions and other information applicable to such GS Strategy.

Terms not otherwise defined in this Specifications Annex shall have the meanings given to them in the General Basket Strategy Base Description.

2. Strategy Specifications

Strategy Name:	Goldman Sachs Commodity Strategy 1133
Strategy Inception Date:	16 January 1995
Publication of Strategy Timely Level and/or Strategy Tradable Level:	Strategy Timely Level
Strategy Publication Data Source:	Bloomberg Ticker: ABGS1133 <Index>
Initial Strategy Level:	100
Strategy Calculation Day:	Any day on which the offices of Goldman, Sachs & Co. in New York are open for business
Reference Date:	Each of (i) the Strategy Inception Date, (ii) 20 May 2020 and (iii) 29 June 2020
Rebalancing Date:	In respect of a Reference Date, such Reference Date.

3. Immediate Components

The Immediate Components of the GS Strategy are as set out in the table below. The Sponsor of each Immediate Component is Goldman Sachs International. For information on each such Immediate Component, please refer to the relevant strategy rules in respect of such Immediate Component.

Table – Immediate Components

Immediate Component	Component Ticker	Immediate Component Weight	Transaction Cost Rate (in basis points)	Servicing Cost Rate (in basis points)	Terminal Component ("T") or Non-Terminal Component ("NT")	Style
Enhanced Strategy CLE205 on the S&P GSCI Crude Oil (ER)	AGGSCL 05 <Index>	In respect of (i) the Rebalancing Date in relation to the Strategy Inception Date:	0	0	T	A

		100%; (ii) the Rebalancing Date in relation to 20 May 2020: 0%; (iii) the Rebalancing Date in relation to 29 June 2020: 100%.				
Enhanced Strategy CLF1E205 on the S&P GSCI Crude Oil 1 Month Forward (ER)	AGGSCLE1 <Index>	In respect of (i) the Rebalancing Date in relation to the Strategy Inception Date: 0%; (ii) the Rebalancing Date in relation to 20 May 2020: 100%; (iii) the Rebalancing Date in relation to 29 June 2020: 0%.	0	0	T	A

GOLDMAN SACHS EXTENDED ROLL STRATEGIES ON THE S&P GSCI COMMODITY INDICES BASE DESCRIPTION

Version 1.0

Dated: 18 March 2019

This description (the "**Strategy Description**") sets out certain rules, methodology, definitions, disclaimers, conflicts of interest and other information applicable to certain notional rules-based proprietary strategies (each, a "**Strategy**" and together, the "**Strategies**") that Goldman Sachs International or its successor (the "**Strategy Sponsor**") may create from time to time. The Strategy Sponsor calculates and publishes each Strategy as further described below. The Strategy Description reflects the policies of, and is subject to change by, the Strategy Sponsor.

Unless the context otherwise requires, all capitalised terms used herein and not otherwise defined herein shall have the meanings given to such terms in the S&P GSCI® Index Methodology dated February 2018 available at http://us.spindices.com/documents/methodologies/methodology-sp-gsci.pdf or any successor page, as amended or updated from time to time (the "**S&P GSCI® Index Methodology**").

1. **Overview of the Strategies**

(a)   General

Each Strategy reflects the returns that are potentially available through an investment in the same commodity futures contract that is included in the relevant S&P GSCI® Single Commodity Sub-Index or S&P GSCI® Single Commodity Forward Sub-Index (in respect of such Strategy, the "**Index**") and is calculated in accordance with the methodology for calculating the relevant Index, subject to certain modifications to the methodology for calculating the relevant Index as further described in Section 3 (*The Adjustment of Roll Contract Expiration*) and Section 4 (*The Strategy Roll Period*) below. Each Strategy is calculated and published by the Strategy Sponsor and displayed on the relevant Bloomberg ticker. The specifications applicable to each Strategy, including, the name of such Strategy, the relevant Index and the relevant Bloomberg ticker are set out in the Table (Strategy, Index and Strategy Bloomberg Ticker) hereto. This methodology is to be read in conjunction with the Relevant Specifications Annex.

(b)   Overview of the relevant Index

Each relevant Index is calculated using what is called an "excess return" methodology and therefore reflects the returns that are potentially available through an investment in the commodity futures contract included in such Index. The use of the term "excess return" in the name of the relevant Index (and the relevant Strategy) refers to the changing value of the commodity futures contract included in the relevant Index and the yield that results from the "rolling" forward of the hypothetical positions in such commodity futures contract as it approaches delivery (i.e., (i) selling near-dated commodity futures contracts (or the commodity futures contracts that are nearing expiration) before they expire, and (ii) buying longer-dated futures contracts (or the commodity futures contracts that have an expiration date further in the future)), and not to any expectations of return.

Each Index is calculated and published by S&P Dow Jones Indices LLC (the "**Index Sponsor**"). The description herein of each Index is intended for informational purposes only. The returns of an Index will not be indicative of an investment in the relevant Strategy. For information on each Index, please refer to Section 8 (*The Index*) below.

(c)   Relationship between a Strategy and the relevant Index

As mentioned above, each Strategy is calculated on a basis similar to the relevant Index. Each Strategy is thus also an excess return strategy and is calculated using the "excess return" methodology as described above.

However, the key difference between a Strategy and the relevant Index is that the Strategy applies different rules for the "rolling" forward of the hypothetical positions in the relevant commodity futures contracts to those used by

the relevant Index, as described in more detail in Section 3 (*The Adjustment of Roll Contract Expiration*) and Section 4 (*The Strategy Roll Period*) below.

(d)   Adjustment events in respect of the roll period

The Strategy Sponsor may make certain adjustments to a Strategy that it determines to be necessary or appropriate (or may cease to calculate the Strategy) including (i) if the contract reference price on a day for the relevant commodity futures contract is a maximum or minimum price for such commodity futures contract on such day, (ii) if the published Daily Contract Reference Price (as defined in the S&P GSCI® Index   Methodology) reflects a manifest error, (iii) if no contract reference price is published by 4:00 p.m., Eastern Standard Time or (iv) trading in the relevant commodity futures contract is terminated prior to its scheduled closing time. These adjustment events are further described in Section 5 (*Adjustment of the Strategy Roll Period*) below.

2.   Composition and Calculation Methodology of a Strategy

Each Strategy comprises the same commodity and commodity futures contract that is included in the relevant Index. As described above, the Strategy is calculated by the Strategy Sponsor on a basis similar to the Index, but adjusted to apply different rules for the "rolling" forward of the hypothetical positions in the relevant commodity futures contracts, as set out in Section 3 (*The Adjustment of Roll Contract Expiration*) and Section 4 (*The Strategy Roll Period*) below. Each Strategy is also an excess and not a total return strategy and therefore does not include the U.S. Treasury Bill Return that could be earned on a fully collateralised hypothetical investment in the commodity futures contract included in such Strategy.

3.   The Adjustment of Roll Contract Expiration

If "Designated Contract Expiration Schedule" in respect of a Designated Contract of such Strategy is not specified or is specified as N/A in the Table in the Relevant Specifications Annex, the definition of "Roll Contract Expiration" in respect to such Designated Contract will be the same as set out in the S&P GSCI® Index Methodology. Othewise, if such Designated Contract Expiration Schedule is specified, then in respect of the Designated Contract of each Strategy, the definition of the term "Roll Contract Expiration" in respect to such Designated Contract in the S&P GSCI® Index Methodology would be modified so that it reads in its entirety as follows:

> "**Roll Contract Expiration**' - With respect to the Designated Contract to be rolled in the Strategy on any S&P GSCI Business Day, the Roll Contract Expiration shall be the Designated Contract Expiration following the Contract Expiration identified in "Designated Contract Expiration Schedule" in respect of such Designated Contract in the Table of the Relevant Specification Annex."

It is understood, acknowledged, and agreed that this modified definition of the term Roll Contract Expiration will result in the relevant Designated Contract of such Strategy being rolled in a manner other than as set out in the S&P GSCI® Index Methodology

4.   The Strategy Roll Period

Each Strategy applies a different roll period to the Roll Period used by the relevant Index. The Roll Period applicable to the relevant Index begins on the fifth S&P GSCI Business Day of each calendar month and ends on the ninth S&P GSCI Business Day of such calendar month, subject to adjustment in accordance with the S&P GSCI® Index Methodology. In contrast, the roll period applicable to the Strategy (the "**Strategy Roll Period**") begins on the Roll Start Date and ends on the Roll End Date, as defined below.

"Last Roll Date" means the first S&P GSCI Business Day that satisfies the two conditions below:

(a)   falls on or after the ninth S&P GSCI Business Day in the month immediately preceding the month in which the roll would take place for the relevant Index; and

(b)   none of the circumstances described in Section 5 (*Adjustment of the Strategy Roll Period*) exist.

"Roll End Date" means the ninth S&P GSCI Business Day in the month in which the roll would take place for the relevant Index.

"Roll Start Date" means the later of:

(a)   the eleventh S&P GSCI Business Day in the month immediately preceding the month in which the roll would take place for the relevant Index; or

(b)   the first S&P GSCI Business Day that falls immediately after the Last Roll Date.

The exposure of a Strategy to the relevant Designated Contract will be rolled in a manner such that an equally attributable percentage is applied over each S&P GSCI Business Day to the amount of exposure of the Strategy to the relevant Designated Contract during the relevant Strategy Roll Period. Therefore, if the relevant Strategy Roll Period is 20 S&P GSCI Business Days, then 5 per cent. of the exposure of the Strategy to the relevant Designated Contract is scheduled to be rolled on each S&P GSCI Business Day. If the relevant Strategy Roll Period is 16 S&P GSCI Business Days, then 6.25 per cent. of the exposure of the Strategy to the relevant Designated Contract is scheduled to be rolled on each S&P GSCI Business Day.

Similar to the Roll Period applicable to an Index, the Strategy Roll Period applicable to a Strategy is subject to adjustment in accordance with the procedures set forth in the S&P GSCI® Index Methodology, as described in Section 5 (*Adjustment of the Strategy Roll Period*) below.

5.   Adjustment of the Strategy Roll Period

If on any day during a Strategy Roll Period (that would otherwise be a S&P GSCI Business Day), any of the following circumstances exist with respect to a Designated Contract included in the Strategy, the portion of the roll in respect of such Designated Contract that would otherwise have taken place on that day is deferred until the next Contract Business Day (provided that such day is also an S&P GSCI Business Day) on which such circumstances do not exist:

(a)   if the Index Sponsor announces or has announced after the start of the current Strategy Roll Period that such day is no longer an S&P GSCI Business Day;

(b)   if such S&P GSCI Business Day is not a Contract Business Day with respect to the First Nearby Contract Expiration or the Roll Contract Expiration in respect of such Strategy Roll Period;

(c)   the applicable Daily Contract Reference Price of the First Nearby Contract Expiration or the Roll Contract Expiration in respect of such Strategy Roll Period on such S&P GSCI Business Day is a Limit Price (i.e., the maximum or minimum price for such Contract Expiration) on such day, as determined by the rules or policies of the relevant Trading Facility;

(d)   the Daily Contract Reference Price published by the relevant Trading Facility for the First Nearby Contract Expiration or the Roll Contract Expiration in respect of such Strategy Roll Period reflects manifest error and such error is not corrected, or such price is not published by 4:00 p.m., Eastern Standard Time. In that event, the Strategy Sponsor may, but is not required to, determine a Daily Contract Reference Price and complete the relevant portion of the roll based on such price; *provided, that*, if the relevant Trading Facility publishes a price before the opening of trading on the next day, the Strategy Sponsor will revise the portion of the roll accordingly; or

(e)   trading in the First Nearby Contract Expiration or the Roll Contract Expiration in respect of such Strategy Roll Period for such S&P GSCI Business Day is terminated prior to its scheduled closing time, and trading in such First Nearby Contract Expiration or Roll Contract Expiration does not resume at least ten minutes prior to, and continue until, the scheduled closing time (or the rescheduled closing time if such closing time was rescheduled as a result of the termination).

As an example, assuming that the Strategy Roll Period is scheduled to be twenty S&P GSCI Business Days, if any of the enumerated circumstances above exist in respect of a Designated Contract included in the Strategy on

the first S&P GSCI Business Day of such Strategy Roll Period, then no portion of the roll in respect of such Designated Contract will be performed on such day and 10 per cent. of the roll in respect of such Designated Contract will be implemented on the next S&P GSCI Business Day. If such circumstances also exist in respect of the same Designated Contract on the second S&P GSCI Business Day of such Strategy Roll Period, then 15 per cent. of the roll in respect of such Designated Contract will be performed on the third S&P GSCI Business Day, and so forth. If such circumstances exist in respect of the same Designated Contract throughout all twenty S&P GSCI Business Days initially designated as such Strategy Roll Period, then the entire roll in respect of the same Designated Contract will be performed on the next succeeding S&P GSCI Business Day on which none of these circumstances exist in respect of such Designated Contract. This procedure for adjusting the Strategy Roll Period is also applied by the Index Sponsor to each Index.

6. Adjustment Events and Change in Methodology

In this Section 6 (*Adjustment Events and Change in Methodology*), references to the "Strategy" shall mean the relevant Strategy, as the case may be, and references to the "Index" shall mean the relevant Index in respect of such Strategy.

(a) Changes to Components of the Strategy

If, in respect of any Component of the Strategy:

(i) the Strategy Sponsor determines that such Component has ceased to be published or listed for trading by the relevant Trading Facility, and has not been replaced by a successor commodity futures contract or contract expiration; or

(ii) the Strategy Sponsor determines that there has been a material change in (A) the content, composition or constitution of the relevant Contract or the commodity referenced by such Contract, or (B) the formula for or method of calculating such Component or the relevant Contract, or (C) the delivery, expiry or settlement terms of such Component or the relevant Contract; or

(iii) the Strategy Sponsor, in its discretion and acting in a commercially reasonable manner, (A) determines that such Component has ceased to be a liquid, actively traded contract expiration that is generally available for trading, or (B) anticipates that such Component, on or before the next Roll Period for the relevant Contract, notwithstanding that it is available for trading, will cease to be a liquid and actively traded contract expiration or will be terminated or delisted by the relevant Trading Facility,

then the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, make such adjustment to the formula or method for calculating the Strategy (including adjustment to the weighting or composition of the Strategy), at the earliest possible opportunity as the Strategy Sponsor determines to be commercially reasonable in order for the Strategy to continue to be calculated notwithstanding any of the foregoing circumstances or in the event that the Strategy Sponsor determines, in its reasonable judgement, that the occurrence of any of the foregoing circumstances would result in a fundamental change to the Strategy, it may (in good faith) elect to discontinue the publication of the Strategy at the earliest possible opportunity as it determines to be commercially reasonable.

For the purposes of the above, "**Component**" means:

(A) a Contract Expiration selected for inclusion in the Strategy; or

(B) if applicable, any Contract Expiration in respect of which the Daily Contract Reference Price is scheduled to be observed in accordance with the procedure (if any) for determining the composition of the Strategy (including, but not limited to, the weighting and selection of Contracts included in the Strategy).

(b) **Changes to Designated Contracts included in the Index**

(i) In the event that any Designated Contract is added to the Index, to the extent that such Designated Contract is relevant for the purposes of the Strategy (as determined by the Strategy Sponsor), it shall be added to the Strategy and the Roll Contract Expiration in respect of such Designated Contract shall be the same as that determined by the Index Sponsor in respect of such Designated Contract in the Index. Any such addition of a Designated Contract to the Strategy will be effected in the same manner (or, in the commercially reasonable judgement of the Strategy Sponsor, as closely as practicable thereto) as the corresponding addition to the Index.

(ii) Subject to paragraph (a) (*Changes to Components of the Strategy*) above, in the event that any Designated Contract is removed from the Index, such Designated Contract shall, at the earliest opportunity that the Strategy Sponsor determines to be commercially reasonable, also be removed from the Strategy. Any such removal of a Designated Contract from the Strategy will be effected in the same manner (or, in the commercially reasonable judgement of the Strategy Sponsor, as closely as practicable thereto) as the corresponding removal from the Index.

(c) **Adjustment Events in respect of the Index**

If, in respect of the Index, and a day on which the Strategy is to be calculated, the Strategy Sponsor determines, in a commercially reasonable manner, that:

(i) the Index Sponsor makes a material change in the weighting or composition of, formula for, or method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method relating to the weighting or composition of such index or other routine events or modifications, including, without limitation, an adjustment under paragraph (b) (*Changes to Designated Contracts included in the Index*) above); or

(ii) the Index Sponsor fails or is not scheduled to calculate and announce the closing level of the Index, or, on or prior to such day, the Index has ceased to be calculated by the Index Sponsor, and has not been replaced by a successor index,

then the Strategy Sponsor shall calculate the value of the Strategy in accordance with the formula for and method of calculating such Strategy last in effect prior to the occurrence of any of the circumstances described above (utilising any adjustment to such formula or method for calculating the Strategy, including adjustment to the weighting or composition of the Strategy, that the Strategy Sponsor determines to be commercially reasonable) or in the event that the Strategy Sponsor determines, in a commercially reasonable manner, that the occurrence of any of the foregoing circumstances would represent a fundamental change to the Strategy, it may (in good faith) elect to discontinue the publication of the Strategy at the earliest possible opportunity as it determines to be commercially reasonable.

7. **Third party information or data**

In this Section 7 (*Third party information or data*), references to the "Strategy" shall mean the relevant Strategy, as the case may be, and references to the "Index" shall mean the relevant Index in respect of such Strategy.

(a) **Adjustments relating to third party information or data**

If, in respect of any third party information or data relied on or which is used to determine, or which constitutes, any weight(s), signal(s) or other input used in the calculation of the Strategy (the "**Third Party Data**"):

(i) the Strategy Sponsor discovers, or is notified by the third party responsible for collecting, calculating, distributing or publishing such Third Party Data (the "**Third Party Data Source**") of, an error or discrepancy in such Third Party Data, the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, disregard such error or discrepancy and shall not be under any

obligation to use the corrected Third Party Data in its calculation of the Strategy, or to correct or revise the value of the Strategy following the release of the corrected Third Party Data by the Third Party Data Source; or

(ii)   (A) the Third Party Data Source ceases to publish such Third Party Data (or the Third Party Data Source announces that it will cease to publish such Third Party Data), and such Third Party Data is not replaced by any equivalent information or data, or (B) there is a material change in the formula for or method of calculating, or the content or frequency of publication of, such Third Party Data, or (C) the Third Party Data Source fails to calculate or publish such Third Party Data for an extended period of time, in the reasonable judgement of the Strategy Sponsor, then the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, (I) elect to disapply some or all modifications made by the Strategy to the Index for any Contract(s) affected by the unavailability or material change(s) to such information or data at the earliest possible opportunity as it determines to be commercially reasonable in order for the Strategy to continue to be calculated notwithstanding the relevant circumstances, or (II) use third party information or data from an alternative data source which it determines to be comparable to such Third Party Data and to be appropriate in order to preserve the original economic objective of the Strategy (and such third party information or data will be deemed to be Third Party Data for the purposes of the Strategy), or (III) make such adjustment(s) to this Strategy Description or to the composition of the Strategy as it determines to be necessary, in its discretion and acting in a commercially reasonable manner, to reflect such unavailability or change(s), or (IV) if the Strategy Sponsor determines that none of the above adjustment(s) would achieve a commercially reasonable result and/or that it is no longer possible or practicable to calculate the Strategy, terminate the calculation and publication of the Strategy without notice.

(b)   Delay in publication of third party information or data

Subject to the foregoing provisions, if a Third Party Data Source fails to publish or make available on the scheduled publication date for any reason any Third Party Data used by the Strategy Sponsor to calculate the Strategy in respect of an S&P GSCI Business Day, the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, use the Third Party Data last published or made available by such Third Party Data Source to calculate the Strategy in respect of such S&P GSCI Business Day.

8.   The Index

In this Section 8 (*The Index*), references to the "Strategy" shall mean the relevant Strategy, as the case may be, and references to the "Index" shall mean the relevant Index in respect of such Strategy.

As the Strategy is a derivation of the Index (which is the "excess return" single commodity version of the S&P GSCI® or S&P GSCI® Forward Indices), and is calculated on a basis similar to, and composed of the same Contract on the same commodity as the Index, the following description is included for information purposes only.

The S&P GSCI® is an index on a production-weighted basket of physical non-financial commodities that satisfy the specified criteria. The S&P GSCI® is designed to be a measure of the performance over time of the markets for these commodities. The only commodities represented in the S&P GSCI® are those physical commodities on which active and liquid contracts are traded on trading facilities in major industrialised countries and are denominated in U.S. dollars. The commodities included in the S&P GSCI® are weighted, on a production basis, to reflect the relative significance (in the view of the Index Sponsor, in consultation with the S&P GSCI® Index Committee) of such commodities to the world economy. The fluctuations in the value of the S&P GSCI® are intended generally to correlate with changes in the prices of such physical commodities in global markets. The S&P GSCI® was established in 1991 and has been normalized such that its hypothetical level on January 2, 1970 was 100. The S&P GSCI® and its sub-indices are calculated and published by the Index Sponsor.

S&P Dow Jones Indices LLC also calculates forward month versions of the S&P GSCI®. S&P GSCI® Forward Indices measure the S&P GSCI Spot, Excess Return, and Total Return indices based on First Nearby Contract Expirations that would be in the index on the specified forward dates. The forward indices follow the same rules, weights and calculation methodology as the S&P GSCI®, with the exception that the Designated Contract Expirations are advanced by the number of months identified by the specific forward (1 through 6 and 12 month forward).

The provisions governing the methodology for determining the composition and calculation of the S&P GSCI® and S&P GSCI® Forward Indices (and the Index) are set out in the annually revised S&P GSCI® Index Methodology, as amended or updated from time to time. Further information about the S&P GSCI® Index Methodology is available at *http://us.spindices.com/documents/methodologies/methodology-sp-gsci.pdf* (or any successor page thereto). Additional information about the S&P GSCI® is available on the following website: http://www.standardandpoors.com. None of the preceding websites nor any material included in such websites is incorporated by reference into this Strategy Description.

The Index is calculated in the same manner as the S&P GSCI® or S&P GSCI® Forward Indices (as applicable) except that such calculations are based entirely on relevant commodity (and the corresponding Designated Contract) included in the Index.

9. Strategy Sponsor

All determinations and calculations made by the Strategy Sponsor shall (in the absence of manifest error) be final and binding on all persons, and the Strategy Sponsor shall have no responsibility to any person for any good faith errors or omissions in any determination or calculation.

10. Publication

The Strategy Sponsor will calculate and publish a value for the Strategy on the relevant Bloomberg ticker set out in the Table (Strategy, Index and Strategy Bloomberg Ticker) hereto corresponding to the relevant Strategy on each day on which the offices of Goldman, Sachs & Co. are open for business in New York City (a "**Publication Date**"). The Strategy Sponsor does not have any obligation to continue to publish, and may discontinue publication of, the Strategy at any time.

11. General Index Provisions

The Goldman Sachs General Index Provisions (version 2.2) dated 15 June 2017 (or any successor version) will apply to the Strategy. For the purposes of the General Index Provisions:

(a)   "GS Index" means the Strategy;

(b)   "Relevant Base Description" means this Description;

(c)   References in the General Index Provisions to the "Index Sponsor" and "Index Calculation Agent" shall mean Goldman Sachs International as sponsor of the strategy;

(d)   "Index Business Day" means a Publication Date; and

(e)   "Index Component" means any contract or contract expiration included in the Strategy.

12. Disclaimers

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IN CALCULATING THE VALUE OF THE STRATEGY, THE STRATEGY SPONSOR MAY OBTAIN AND USE DATA AND INFORMATION FROM THIRD PARTY SOURCES. THE STRATEGY SPONSOR IS NOT UNDER ANY OBLIGATION OR DOES NOT CURRENTLY INTEND GENERALLY TO INDEPENDENTLY VERIFY SUCH INFORMATION AND THE STRATEGY SPONSOR DOES NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF SUCH DATA OR INFORMATION AND, CONSEQUENTLY, NEITHER THE STRATEGY SPONSOR NOR ITS AFFILIATES OR SUBSIDIARIES GUARANTEES THE QUALITY, ACCURACY AND/OR COMPLETENESS OF THE STRATEGY OR ANY DATA INCLUDED THEREIN. THE STRATEGY SPONSOR SHALL NOT BE LIABLE (WHETHER IN CONTRACT, TORT OR OTHERWISE) TO ANY PERSON FOR ANY INACCURACY, OMISSION, MISTAKE OR ERROR IN THE CALCULATION OR DISSEMINATION OF THE VALUE OF THE STRATEGY BASED ON THE DATA AND INFORMATION FROM THIRD PARTY SOURCES AND THE STRATEGY SPONSOR IS NOT UNDER ANY OBLIGATION TO ADVISE ANY PERSON OF ANY INACCURACY, OMISSION, MISTAKE OR ERROR IT BECOMES AWARE OF.

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THE STRATEGY SPONSOR WILL MAKE ALL DETERMINATIONS AND TAKE ALL ACTIONS (OR DECLINE TO TAKE ACTION) IN RELATION TO THE STRATEGY IN ITS SOLE DISCRETION.

WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL THE STRATEGY SPONSOR HAVE ANY LIABILITY (WHETHER IN CONTRACT, TORT OR OTHERWISE) TO ANY PERSON FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR ANY OTHER DAMAGES (INCLUDING LOST PROFITS) EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

NOTHING IN THIS DISCLAIMER SHALL EXCLUDE OR LIMIT LIABILITY TO THE EXTENT SUCH EXCLUSION OR LIMITATION IS NOT PERMITTED BY LAW.

13. Conflicts of Interest

In this Section 13 (*Conflicts of Interest*), references to the "Strategy" shall mean the relevant Strategy, as the case may be, and references to the "Index" shall mean the relevant Index in respect of such Strategy.

The following list of conflicts does not purport to be a complete list or explanation of all the conflicts of interests associated with the Strategy.

Overview of the roles of the Goldman Sachs Group ("GSG")

GSG members have multiple roles in connection with the Strategy:

- Goldman Sachs International is responsible for calculating and publishing the value of the Strategy and for making certain determinations in respect of the Strategy from time to time in its capacity as Strategy Sponsor.

- The Strategy is designed by, and are operated in accordance with, a methodology developed by the Strategy Sponsor. Among other things, the Strategy Sponsor will set the parameters within which the Strategy operates. The Strategy Sponsor does not have any obligation to continue to calculate and publish the value of the Strategy. Except in the limited circumstances set out below, the Strategy Sponsor does not generally exercise any discretion in relation to the operation of the Strategy. The Strategy Sponsor owes no fiduciary duties in respect of the Strategy. The circumstances in which the Strategy Sponsor may exercise discretion include, but are not limited to, those situations more particularly described in this Strategy Description.

- GSG is a full-service financial services group and, consequently, is engaged in a range of activities that could affect the value of the Strategy and any Component of the Strategy either positively or negatively as further described below.

Potential conflicts of interest

The Strategy Sponsor, its affiliates and subsidiaries may face conflicts between the roles they perform in respect of the Strategy and their own interests. In particular, in its other businesses, the Strategy Sponsor may have, or enter into transactions to create, a physical, economic or other interest (including an adverse and/or short interest, as the case may be) in the Strategy, products linked thereto, and/or any Components of the Strategy and investments referenced by or linked to any Components of the Strategy and may exercise remedies or take other action in respect of its interests as it deems appropriate.

The following actions could adversely affect the value of the Strategy:

- The Strategy Sponsor may actively trade products linked to the Strategy, the Components, investments referenced by or linked to the Components and any other related investments. These activities could adversely affect the value of the Strategy, which could in turn affect the return on, and the value of, any products linked to the Strategy.

- The Strategy Sponsor may have access to information relating to the Strategy, products linked to the Strategy, and/or the Components or investments referenced by or linked to the Components. The Strategy Sponsor is not obliged to use that information for the benefit of any person acquiring or entering into any products linked to the Strategy.

- Certain activities conducted by the Strategy Sponsor may conflict with the interests of those acquiring products linked to the Strategy. It is possible that the Strategy Sponsor could receive substantial returns in respect of these activities while the value of any investment referenced to the Strategy may decline. For example:

  - The Strategy Sponsor and other parties may issue or underwrite additional securities or trade other financial or derivative instruments or investments referenced to the Strategy, and/or the Components. An increased level of investment and trading in these securities, instruments or investments may negatively affect the performance of the Strategy and could affect the value of such the Strategy and, therefore, the amount payable at maturity (or on any other payment date) on any products linked to the Strategy and the value of any such products before that date. Such securities, instruments or investments may also compete with any products linked to the Strategy. By introducing competing products into the marketplace in this manner, the Strategy Sponsor could adversely affect the market value of any products linked to the Strategy and the amount paid by it on such products at maturity (or on any other payment date). To the extent that the Strategy Sponsor serves as issuer, agent or underwriter of those securities or other similar instruments or investments, its interests in respect of those securities, instruments or investments may be adverse to the interests of a holder of any products linked to the Strategy.

  - Although the Strategy Sponsor is not obliged to do so, it may elect to hedge its exposure or potential or expected exposure to the Strategy, any products linked thereto, and/or the Components, or any investment referenced by or linked to the Components with an affiliate or a third party. Such affiliate or third party, in turn, is likely to directly or indirectly hedge any of its exposure or potential or expected exposure, including through transactions taking place on the futures and/or options markets. Where the Strategy Sponsor chooses to hedge its exposure or potential or expected exposure, it may adjust or unwind such hedges by purchasing or selling products linked to the Strategy, and/or Components, any investments referenced by or linked to the Components or any other product on or before the date the Strategy is valued for purposes of any investments referenced to the Strategy. The Strategy Sponsor may also enter into, adjust or unwind hedging transactions relating to other instruments linked to the Strategy and/or the Components. Any such hedging activity may adversely affect the value of the Strategy and any products linked to the Strategy.

  - The Strategy Sponsor may also engage in trading for its proprietary accounts, for other accounts under its management or to facilitate transactions, including block transactions, on behalf of customers relating to one or more products linked to the Strategy, and/or the Components or any investment referenced by or linked to the Components. In the course of these transactions, the

Strategy Sponsor's customers may receive information about the Strategy before it is made available to other investors. Any of these activities could also adversely affect the value of the Strategy directly or indirectly by affecting the level of the Components or the investments referenced by or linked to the Components and, therefore, the market value of any products linked to the Strategy and the amount paid on any such product at maturity.

- In its capacity as sponsor of the Strategy, the Strategy Sponsor will have discretion under certain circumstances to make various determinations that affect the Strategy and products linked to the Strategy, including, among others, in those situations more particularly described in this Strategy Description herein. The Strategy Sponsor may use these determinations to calculate how much cash it must pay at maturity or, as the case may be, upon any early redemption of any such product linked to the Strategy. The exercise by the Strategy Sponsor of this discretion could adversely affect the value of any such product linked to the Strategy. It is possible that the exercise by the Strategy Sponsor of its discretion to change the relevant Strategy methodology may result in substantial returns in respect of the Strategy Sponsor's trading activities for its proprietary accounts, for other accounts under its management or to facilitate transactions on behalf of customers relating to one or more products linked to the Strategy, and/or the Components or any investment referenced by or linked to the Components.

The Strategy Sponsor may publish research, express opinions or provide recommendations (for example, with respect to the relevant Components in respect of the Strategy) that are inconsistent with investing in products linked to the Strategy, and which may be revised at any time. Any such research, opinions or recommendations may or may not recommend that investors buy or hold the relevant Components and could affect the value and or performance of the Strategy or of products linked to the Strategy.

14. Risk Factors

In this Section 14 (*Risk Factors*), references to the "Strategy" shall mean the relevant Strategy, as the case may be, and references to the "Index" shall mean the relevant Index in respect of such Strategy.

The following list of risk factors does not purport to be a complete list or explanation of all the risks associated with the Strategy.

General risk factors relating to the Strategy

No assurance can be given that the methodology underlying the Strategy will be successful in producing positive returns or that the Strategy will outperform any other alternative investment strategy

Furthermore, it should be noted that the results that may be obtained from investing in any financial instrument linked to the Strategy or otherwise participating in any transaction linked to the Strategy might well be significantly different from the results that could theoretically be obtained from a direct investment in the Designated Contract or any related derivatives.

Historical levels of the Strategy may not be indicative of future performance

Past performance of the Strategy is not indicative as to future performance. The Strategy is based on historical performance of certain assets and/or underlyings and aims to capture trends in certain markets by using historical data over a pre-defined period. The actual performance of the Strategy in the future may bear little relation to the historical value of the Strategy.

Historical analysis or other statistical analysis in respect of the Strategy is no guarantee of the performance of the Strategy

Certain presentations and historical analysis or other statistical analysis materials in respect of the operation and/or potential returns of the Strategy which may be provided are based on simulated analyses and hypothetical circumstances to estimate how the Strategy may have performed prior to its actual existence. The Strategy Sponsor may use historical data that is available to calculate the hypothetical level of the Strategy prior to its inception. If the Strategy Sponsor determines that if such historical data is not available or is incomplete, the Strategy Sponsor may use alternate sources of data in place of such historical data as well as make certain modifications to the Strategy methodology as it deems necessary to calculate the hypothetical level of the

Strategy prior to its inception. Neither the Strategy Sponsor nor the issuer of any financial instrument linked to the Strategy provides any assurance or guarantee that the Strategy will operate or would have operated in the past in a manner consistent with those materials. As such, any historical returns projected in such materials or any hypothetical simulations based on these analyses or hypothetical levels, which are provided in relation to the Strategy, may not reflect the performance of, and are no guarantee or assurance in respect of the performance or returns of, the Strategy over any time period.

The holder of any financial instrument linked to the Strategy will have no rights with respect to the Designated Contract

Investing in any financial instrument linked to the Strategy will not make the investor a holder of any commodity futures contracts included in the Strategy or any commodity underlying of such futures contracts. The holder or owner of any financial instrument linked to the Strategy will not have any rights with respect to any commodity futures contracts or the relevant commodity underlying. Any amounts payable on any financial instrument linked to the Strategy will be made in cash, and the holder or owner of any financial instrument linked to the Strategy will have no right to receive any commodity futures contracts included in the Strategy or any commodity underlying such commodity futures contracts.

The Strategy is not actively managed

The Strategy will be operated in accordance with the methodology set forth in this Strategy Description. There will be no active management of the Strategy so as to enhance returns beyond those embedded in the Strategy. Market participants often adjust their investments promptly in view of market, political, financial or other factors. An actively managed investment may potentially respond more directly and appropriately to immediate market, political, financial or other factors than a non-actively managed strategy such as the Strategy. No assurance can be given that the Strategy will replicate or outperform a comparable strategy which is actively managed and the return on the Strategy may be lower than the return on an actively managed strategy.

Information about the Strategy is no guarantee of the performance of the Strategy

Certain presentations and historical analysis or other statistical analysis materials in respect of the operation and/or potential returns of the Strategy which may be provided are based on simulated analysis and hypothetical circumstances to estimate how the Strategy may have performed prior to its actual existence. The Strategy Sponsor and/or any of its affiliates provides no assurance or guarantee that the Strategy will operate or would have operated in the past in a manner consistent with those materials. As such, any historical returns projected in such materials or any hypothetical simulations based on these analyses, which are provided in relation to the Strategy, may not reflect the performance of, and are no guarantee or assurance in respect of the performance or returns of, the Strategy over any time period.

The policies of the Strategy Sponsor and changes that affect the Strategy could affect the value of the Strategy

The policies of the Strategy Sponsor concerning the calculation of the Strategy could affect the value of the Strategy and, therefore, the amount payable on any financial instruments linked to the Strategy on the stated maturity date of such financial instruments and the market value of such financial instruments before that date. The amount payable on any financial instruments linked to the Strategy and their market value could also be affected if the Strategy Sponsor changes these policies, for example, by changing the manner in which it calculates the Strategy, or if the Strategy Sponsor discontinues or suspends calculation or publication of the Strategy, in which case it may become difficult to determine the market value of such financial instruments. If such policy changes relating to the Strategy or the calculation or publication of the Strategy is discontinued or suspended, the calculation agent of any financial instrument linked to the Strategy (which may be Goldman Sachs International or Goldman, Sachs & Co.) will have discretion in determining the value of the Strategy on the relevant determination date and the amount payable on such financial instruments.

The Strategy Sponsor has the discretion to make determinations that could materially affect the Strategy and create conflicts of interest

The Strategy Sponsor does not generally exercise any discretion and owe no fiduciary duties in respect of the Strategy. The Strategy Sponsor has, however, a certain amount of discretion in the event of, amongst other

things, the occurrence of certain adjustment events in respect of the Strategy.

Determinations made by the Strategy Sponsor could adversely affect the value of the Strategy or any financial instrument linked to the Strategy and the exercise by the Strategy Sponsor of its discretion could present it with a conflict of interest of the kind described in Section 13 (*Conflicts of Interest*). In making those determinations, the Strategy Sponsor will not be required to take the interests of any investor of any such financial instrument into account or consider the effect its determinations will have on the value of such a financial instrument. All determinations made by the Strategy Sponsor will be at its sole discretion and will be conclusive for all purposes and will bind all holders of any financial instruments linked to the Strategy. The Strategy Sponsor will have no liability for such determinations.

Trading and other transactions by GSG could materially affect the value of any financial instrument linked to the Strategy

GSG is a full-service financial services firm engaged in a range of market activities. GSG may issue, arrange for the issue of, or enter into financial instruments referenced to, the Strategy and/or the Designated Contract and arrange for the distribution of these financial instruments, including the payment of distribution fees and commissions to any intermediaries. These activities could adversely affect the value of the Strategy and/or the value of the Designated Contract, and may present GSG with a conflict of interest of the kind described in Section 13 (*Conflicts of Interest*).

Information provided by the Strategy Sponsor about the value of any Designated Contract may not be indicative of future performance

Any information about the performance of any Designated Contract provided by the Strategy Sponsor will be or has been furnished as a matter of information only, and an investor in a financial instrument linked to the Strategy should not regard the information as indicative of the range of, or trends in, fluctuations in the levels or values that may occur in the future. Such information will likely differ from the actual values and levels used under the relevant methodology used to calculate the Strategy.

Information about the Strategy may only be available through the Strategy Sponsor

The Strategy Sponsor may not provide holders of any financial instrument linked to the Strategy with further information in relation to the Strategy beyond what is provided in this Strategy Description, and further information may not be generally available. The Strategy Sponsor has entered into non-exclusive licensing agreements with certain of its third party data suppliers in order to source the necessary data to calculate the Strategy. The formalities necessary to obtain access to such figures may deter potential investors from buying a financial instrument linked to the Strategy on the secondary market.

The Strategy Sponsor may rely upon third party and other external and internal data sources which may be inaccessible and/or inaccurate, and the inputs used by the Strategy Sponsor to run the strategy calculations may affect the value of the Strategy

The Strategy Sponsor may rely upon third party brokers or external dealers and other external and internal sources to obtain certain inputs necessary to compute the value of the Strategy. The inability of the Strategy Sponsor to source necessary data to calculate the relevant formulae of the Strategy may affect the value of the Strategy. In addition, the Strategy Sponsor makes no warranty as to the correctness or completeness of that information and takes no responsibility for the accuracy of such data or the impact of any inaccuracy of such data on the value of the Strategy.

Financial instruments linked to the Strategy may be exposed to more or less risk, or perform better or worse, based upon the inputs received from the above suppliers or sources, than an actual investment in or linked to the Designated Contract.

The Strategy may be changed or become unavailable

The Strategy Sponsor shall have the right to alter the methodology used to calculate the Strategy or discontinue publication of the value of the Strategy and such event may result in a decrease in the value of or return on any financial instrument linked to the Strategy.

Furthermore, the decisions and policies of the Strategy Sponsor concerning the calculation of the value of the Strategy could affect its value and, therefore, the amount payable over the term of any financial instrument linked to the Strategy and the market value of such financial instrument. The amount payable on any financial instrument linked to the Strategy and its market value could also be affected if the Strategy Sponsor changes these policies.

Specific risks relating to the Strategy

The Strategy has a limited operating history and may perform in unanticipated ways

As the Strategy is a relatively new strategy and limited historical performance data exists with respect to the Strategy, an investment linked to returns generated by the Strategy may involve greater risk than an investment linked to returns generated by an investment strategy with a proven track record. A longer history of actual performance could provide more reliable information on which to assess the validity of the Strategy and on which to base an investment decision, and the fact that the Strategy is relatively new means that its history of actual performance is relatively short. There can be no guarantee or assurance that the Strategy will operate in a manner consistent with the data available.

Data sourcing and calculation risks associated with the Strategy and the Designated Contract may adversely affect the value of the Strategy

The Strategy is linked to exchange-traded futures contracts on commodities, and therefore calculated based on price data that may be subject to potential errors in data sources or other errors that may affect the prices published by the relevant sponsor (and therefore the level of the Strategy). Such errors could adversely affect the level of the Strategy. Neither the Strategy Sponsor, nor any of its affiliates is under any obligation or currently intends to independently verify such third party information or data from any third party data source or to advise any investor in any financial instrument linked to the Strategy of any inaccuracy, omission, mistake or error of which it or any such affiliate becomes aware. Consequently, neither the Strategy Sponsor nor any of its affiliates shall be liable (whether in contract or otherwise) to any person for any inaccuracy, omission, mistake or error in the calculation or dissemination of the value of the Strategy. There can be no assurance that any error or discrepancy on the part of any data source or sponsor will be corrected or revised. Even if any error or discrepancy on the part of any third party data source or sponsor is corrected or revised, neither the Strategy Sponsor nor any of its affiliates is under any obligation or currently intends to incorporate any such correction or revision into the calculation of the level of the Strategy or the price of any Designated Contract. Neither the Strategy Sponsor, or any of its affiliates makes any representation or warranty, express or implied, as to the correctness or completeness of that information and takes no responsibility for the accuracy of such data or the impact of any inaccuracy of such data on the value of the Strategy or the price of any Designated Contract. Any of the foregoing errors or discrepancies could also adversely affect the value of the Strategy or the Designated Contract.

Although the Strategy is based on the same commodity futures contract underlying the Index, its value and returns may differ from those of the Index

The Strategy is based on the same commodity futures contract underlying the Index and calculated using the same methodology as the Index, but applies different rules for the "rolling" forward of the hypothetical positions in the relevant commodity futures contracts. An investor in a financial instrument linked to the Strategy should be aware that the risk factors applying to the Index will also apply to such financial instrument, but that the return or amount payable under such financial instrument do not reflect the performance of the Index. In particular, the different rules governing the roll period for the underlying Designated Contract may result in significant differences between the performance of the Strategy and the performance of the Index. These different rules governing the roll period for the underlying Designated Contract are generally intended to enhance the performance of the Strategy over that of the Index, but there can be no assurance that the different rules will have the intended effect and it is possible that they could actually result in the Strategy underperforming the Index.

The Strategy may be subject to Adjustment Events

The Strategy Sponsor may make certain adjustments to the Strategy that it determines to be commercially

reasonable, or may cease to calculate the Strategy, upon the occurrence of certain events such as: (a) if a Component has ceased to be published or listed for trading by the relevant Trading Facility, and has not been replaced by a successor contract expiration, (b) there has been a material change in (i) the content, composition or constitution of the relevant Contract or the commodity referenced by such Contract, or (ii) the formula for or method of calculating a Component or the relevant Contract, or (iii) the terms of a Component or the relevant Contract, or (c) a Component has ceased (or it is anticipated that such Component will cease) to be a liquid, actively traded contract expiration that is generally available for trading or will be terminated or delisted by the relevant Trading Facility.

If the Index Sponsor (a) makes, in the reasonable judgment of the Strategy Sponsor, a material change in the weighting or composition of, formula for, or method of calculating the Index or in any other way materially modifies the Index, or (b) fails or is not scheduled to calculate the level of the Index, or the Index has ceased to be calculated by the Index Sponsor, and has not been replaced by a successor index, the Strategy Sponsor may calculate the value of the Strategy in accordance with the formula for and method of calculating the Strategy last in effect prior to the occurrence of such circumstances, or may cease to calculate the Strategy.

In such cases, it is likely that the value of the Strategy will be different from what it would have been if such events had not occurred, and it may vary unpredictably and could be lower.

Suspension or disruptions of market trading in the commodity and related options futures markets may adversely affect the value of the Strategy

The commodity markets are subject to temporary distortions or other market disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. In addition, U.S. futures exchanges and some foreign exchanges have regulations that limit the amount of fluctuation in futures contract prices that may occur during a single business day. These limits are generally referred to as "daily price fluctuation limits" and the maximum or minimum price of a contract on any given day as a result of these limits is referred to as a "limit price." Once the limit price has been reached in a particular contract, no trades may be made at a different price. Limit prices have the effect of precluding trading in a particular contract or forcing the liquidation of contracts at disadvantageous times or prices. These circumstances could adversely affect the price of the Designated Contract in the Strategy and, therefore, the value of the Strategy and the value of any financial instruments linked to the Strategy.

Risks relating to commodity prices, the Index and commodity futures contracts underlying the Index and the Strategy

Exposure to commodity futures contracts through an investment in the Strategy compared to "spot" prices

— **Rolling** - It is typical in commodity markets to take the price of the first-nearby commodity futures contract with respect to a commodity (that is, as of a given date, the commodity futures contract first to expire following such date) as a reference for the "spot" price of such commodity. Over time such "spot" price will vary for two reasons. Firstly, the price of the first-nearby commodity futures contract will vary over time due to market fluctuations. Secondly, when the commodity futures contract which is considered to be the first-nearby contract changes from contract expiration "X" to contract expiration "Y" (as contract expiration "X" is approaching expiry), there is a discrete change in the price of the "prevailing" first-nearby commodity futures contract. If contract expiration "Y" is trading at a premium to contract expiration "X" (referred to as a "contango" market, as described in further detail below), the discrete change will represent a "jump" in the "spot" price. If contract expiration "Y" is trading at a discount to contract expiration "X" (referred to as a "backwardated" market, as described in further detail below) the discrete change will represent a "drop" in price.

— **Effect of "jump" or "drop"** - Since a "jump" or "drop" does not correspond to a change in price of any given commodity futures contract, these economics cannot be captured by a futures-linked investment such as the Strategy. Therefore, all other things being equal (in particular, assuming no change in the relative price of the various contract expirations with respect to the relevant commodity futures contract), in a "contango" market a long-only futures-linked investment may be expected to underperform the "spot" price (due to not capturing the "jump" in spot price) and in a "backwardated" market a long-only futures-

linked investment may be expected to outperform the "spot" price (due to not capturing the "drop" in spot price).

— "Backwardation" occurs when the price of a near-dated commodity futures contract is greater than the price of a longer-dated commodity futures contract, the market for such contracts is referred to as in "backwardation". "Contango" occurs when the price of the near-dated commodity futures contract is lower than the price of the longer-dated commodity futures contract, the market for such contracts is referred to as in "contango".

— Accordingly, investors in any financial instrument linked to the Strategy may receive a lower payment upon maturity or final settlement of such financial instrument than such investor would have received if he or she had invested directly in the commodities underlying the commodity futures contracts to which the Strategy is linked or a financial instrument whose redemption or settlement amount was based upon the spot price of physical commodities or commodity futures contracts that were scheduled to expire on the maturity date of the financial instrument.

Commodity prices are characterised by high and unpredictable volatility, which could lead to high and unpredictable volatility in the Strategy

Commodity prices, and, consequently, the prices of corresponding commodity futures contracts, are affected by various factors, including, but not limited to, supply and demand, liquidity, weather conditions and natural disasters, government programs and policies, political, military, terrorist and economic events as set out in more detail below.

— *Supply and demand -* The planning and management of commodities supplies is very time-consuming. This means that the scope for action on the supply side is limited and it is not always possible to adjust production swiftly to take account of demand. Demand can also vary on a regional basis. Transport costs for commodities in regions where these are needed also affect their prices. The fact that some commodities take a cyclical pattern, such as agricultural products which are only produced at certain times of the year, can also result in major price fluctuations.

— *Liquidity -* Not all commodities markets are liquid and able to quickly and adequately react to changes in supply and demand. The fact that there are only a few market participants in the commodities markets means that speculative investments can have negative consequences and may distort prices.

— *Weather conditions and natural disasters -* Unfavourable weather conditions can influence the supply of certain commodities for the entire year. This kind of supply crisis can lead to severe and unpredictable price fluctuations. Diseases and epidemics can also influence the prices of agricultural commodities.

— *Governmental programs and policies, national and international political, military and economic events and trading activities in commodities and related contracts -* Commodities are often produced in emerging market countries, with demand coming principally from industrialised nations. The political and economic situation is however far less stable in many emerging market countries than in the developed world. They are generally much more susceptible to the risks of rapid political change and economic setbacks. Political crises can affect purchaser confidence, which can as a consequence affect commodity prices. Armed conflicts can also impact on the supply and demand for certain commodities. It is also possible for industrialised nations to impose embargos on imports and exports of goods and services. This can directly and indirectly impact commodity prices. Furthermore, numerous commodity producers have joined forces to establish organisations or cartels in order to regulate supply and influence prices.

These factors may adversely affect the value of the Strategy and the value of any financial instrument linked thereto in varying ways, and different factors may cause the value and volatility of different commodities to move in inconsistent directions and at inconsistent rates.

Change in the composition or discontinuance of the Index could affected the value of the Strategy

The Strategy is based on the same commodity futures contracts underlying the Index and calculated using

the same methodology as the Index, save for the modifications described in Section 3 (*The Adjustment of Roll Contract Expiration*) and Section 4 (*The Strategy Roll Period*). The Index is calculated and maintained by S&P Dow Jones Indices as sponsor, who is also responsible for the composition of the Index. The sponsor of the Index will have no involvement in the offer and sale of any financial instrument linked to the Strategy and will have no obligation to any purchaser of such instruments. The sponsor of the Index may take any actions in respect of the Index without regard to the interests of the Strategy Sponsor of the Strategy or any investors in financial instruments linked to Strategy, and any of these actions could adversely affect the value of the Strategy together with the market value of any financial instruments linked to the Strategy.

The sponsor of the Index can substitute the commodity futures contracts underlying the Index (for example, if a commodity futures contract referenced by the Index were to be delisted, terminated or replaced by the relevant exchange on which such underlying commodity futures contract is traded) or make other changes to the methodology for calculating the Index. The composition of the Index may also change over time as additional commodity contracts satisfy the eligibility criteria or commodity contracts currently included in the Index fail to satisfy such criteria. Such changes to the composition of the Index (and therefore, of the Strategy) may affect the value of the Strategy as any newly added commodity contract may perform significantly worse or better than the commodity contract it replaces. The sponsor of the Index may also alter, discontinue or suspend calculation or dissemination of the Index. In such circumstances, the Strategy Sponsor would have the discretion to make determinations with respect to the level of the Strategy including for the purposes of calculating the amount payable on any financial instrument linked to the Strategy.

The Index may in the future include commodity futures contracts that are not traded on regulated futures exchanges

The Index is based solely on commodity futures contracts traded on regulated futures exchanges (referred to in the United States as "**designated contract markets**"). At present, the Index continues to be comprised exclusively of regulated commodity futures contracts. However, the Index may in the future include over-the-counter contracts (such as swaps and forward contracts) traded on trading facilities that are subject to lesser degrees of regulation or, in some cases, no substantive regulation. As a result, trading in such commodity futures contracts, and the manner in which prices and volumes are reported by the relevant trading facilities, may not be subject to the same provisions of, and the protections afforded by, the U.S. Commodity Exchange Act 1936, as amended, or other applicable statues and related regulations, that govern trading on regulated futures exchanges. In addition, many electronic trading facilities have only recently initiated trading and do not have significant trading histories. As a result, the trading of commodity futures contracts on such facilities and the inclusion of such commodity futures contracts included in the Index may be subject to certain risks not presented by most exchange-traded futures contracts, including risks related to the liquidity and price histories of the relevant commodity futures contracts.

The Index may be subject to pronounced risks of pricing volatility

As a general matter, the risk of low liquidity or volatile pricing around the maturity date of a commodity futures contract is greater than in the case of other futures contracts because (among other factors) a number of market participants take physical delivery of the underlying commodities. Many commodities, like those in the energy and industrial metals sectors, have liquid futures contracts that expire every month. Therefore, these contracts are rolled forward every month. Contracts based on certain other commodities, most notably agricultural and livestock products, tend to have only a few contract months each year that trade with substantial liquidity. Thus, these commodities, with related futures contracts that expire infrequently, roll forward less frequently than every month, and can have further pronounced pricing volatility during extended periods of low liquidity. The risk of aberrational liquidity or pricing around the maturity date of a commodity futures contract is greater than in the case of other futures contracts because (among other factors) a number of market participants take delivery of the underlying commodities. It should be noted that due to the significant level of continuous consumption, limited reserves, and oil cartel controls, energy commodities are subject to rapid price increases in the event of perceived or actual shortages. These factors (when combined or in isolation) may affect the price of commodity futures contracts and, as a consequence, the performance of the Strategy.

Commodities are subject to legal and regulatory regimes that may change in ways that could affect the value of the Strategy

Commodities are subject to legal and regulatory regimes in the United States and, in some cases, in other countries that may change in ways that could negatively affect the value of the Strategy.

The Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank"), which effected substantial changes to the regulation of the futures and over-the-counter ("OTC") derivatives markets, was enacted in July 2010. Dodd-Frank requires regulators, including the Commodity Futures Trading Commission (the "CFTC"), to adopt regulations to implement many of the requirements of the legislation. While the CFTC has adopted many of the required regulations, a number of them have only recently become effective, and certain requirements remain to be finalised. The ultimate impact of the regulatory scheme, therefore, cannot yet be fully determined. Under Dodd-Frank, the CFTC approved a final rule to impose limits on the size of positions that can be held by market participants in futures and OTC derivatives on physical commodities. Those rules were challenged in federal court by industry groups and were vacated by a decision of the court in September 2012. While the CFTC subsequently proposed new rules that have not yet been adopted governing position limits, and has recently adopted final rules governing the aggregation of positions by market participants under common control and by trading managers, their ultimate scope and impact, as well as the content, scope or impact of other CFTC rules, cannot be conclusively determined at present, and these limits could restrict the ability of certain market participants to participate in the commodities, futures and swap markets and markets for other OTC derivatives on physical commodities to the extent and at the levels that they have in the past. These factors may also have the effect of reducing liquidity and increasing costs in these markets as well as affecting the structure of the markets in other ways. In addition, these legislative and regulatory changes have increased, and will continue to increase, the level of regulation of markets and market participants, and therefore the costs of participating in the commodities, futures and OTC derivatives markets. Without limitation, these changes require many OTC derivatives transactions to be executed on regulated exchanges or trading platforms and cleared through regulated clearing houses. Swap dealers (as defined by the CFTC) are also required to be registered and are or will be subject to various regulatory requirements, including, but not limited to, proposed capital and margin requirements, record keeping and reporting requirements and various business conduct requirements. These legislative and regulatory changes, and the resulting increased costs and regulatory oversight requirements, could result in market participants being required to, or deciding to, limit their trading activities, which could cause reductions in market liquidity and increases in market volatility. In addition, transaction costs incurred by market participants are likely to be higher than in the past, reflecting the costs of compliance with the new regulations. These consequences could adversely affect the level of any underlying index or strategy or any underlying commodity futures contracts, or the return on the Strategy.

In addition, other regulatory bodies have passed or proposed, or may propose in the future, legislation similar to that proposed by Dodd-Frank or other legislation containing other restrictions that could adversely impact the liquidity of and increase costs of participating in the commodities markets. For example, the Markets in Financial Instruments Directive (Directive 2014/65/EU, "**MiFID II**") and the accompanying Markets in Financial Instruments Regulation ("**MiFIR**") which applies from 3 January 2018, introduces a new regime for EU Member States to establish and apply position limits on the net position which a person can hold at any time in commodity derivatives traded on trading venues and in economically equivalent OTC contracts. These position limits are to be set according to a methodology determined at the EU level, but applied by EU Member State authorities. As part of this requirement, in May 2017, level 2 legislation was published in the Official Journal of the EU setting out the calculation methodology to be used when calculating such limits. A number of national competent authorities (including the FCA) have applied such calculation methodologies to set position limits for certain commodity derivatives. Both MiFID II and the related level 2 legislation applies from 3 January 2018. National implementing measures will potentially also be required for position limits to become effective in member states which have not yet transposed MiFID II.

By way of further example, the European Market Infrastructure Regulation (Regulation (EU) No 648/2012) ("**EMIR**") currently requires reporting of derivatives and various risk mitigation techniques such as timely confirmation, mandatory margin exchange and portfolio reconciliation to be applied to OTC derivatives. Mandatory clearing is in the process of being implemented by class of counterparty.

Changes to be implemented under both EMIR and MiFID II and MiFIR will impact a broad range of counterparties, both outside and within the EU, and are expected to increase the cost of transacting derivatives. This, along with other regulations or additional implementing measures in relation to these regulations that are adopted in the future, could have an adverse impact on the level of the Strategy.

Specifications Annex - GOLDMAN SACHS EXTENDED ROLL STRATEGIES ON THE S&P GSCI COMMODITY INDICES

Version 1.1

Dated: 23 July 2019

1. Introduction

This Specifications Annex, as may be amended from time to time, constitutes the Relevant Specifications Annex for the purposes of "GOLDMAN SACHS EXTENDED ROLL STRATEGIES ON THE S&P GSCI COMMODITY INDICES BASE DESCRIPTION" (the "**Base Description**"), and utilises the methodology set out therein to calculate the level of each GS Strategy identified in paragraph 2 (*Strategy Specifications*) below.

This Specifications Annex should be read in conjunction with the Base Description, which comprises certain rules, methodology, definitions, disclaimers, risk factors and other information applicable to each such GS Strategy.

Terms not otherwise defined in this Specifications Annex shall have the meanings given to them in the Base Description.

The Strategy Rules in respect of the GS Strategy shall be constituted of the following documentation elements read together:

(i)   this Specifications Annex;

(ii)   the Base Description; and

(iii)   the Goldman Sachs General Index Provisions,

and in the event of any inconsistency between these documentation elements, the provisions shall prevail according to the order given above (e.g., the provisions of this Specifications Annex shall prevail over all other documentation elements).

2.   Strategy Specifications

Table 1 (Strategy, Strategy Bloomberg Ticker, Index, Designated Contract, Trading Facility and Designated Contract Expiration Schedule)

Each Index included in the table below is the relevant Index in respect of the Strategy in the same row.

Strategy	Strategy Bloomberg ticker (Excess Return)	Strategy Bloomberg ticker (Total Return)	Index	Designated Contract	Trading Facility	Designated Contract Expiration Schedule
Enhanced Strategy BCE205 on S&P GSCI® Brent Crude Index	AGGSBC05 <Index>		S&P GSCI® Brent Crude Index			
Enhanced Strategy BCF3E205 on S&P GSCI® Brent Crude 3 Month Forward Index	AGGSBCC0 <Index>		S&P GSCI® Brent Crude 3 Month Forward Index			
Enhanced Strategy BCF6E205 on S&P GSCI® Brent Crude 6 Month Forward Index	AGGSBCE6 <Index>		S&P GSCI® Brent Crude 6 Month Forward Index			
Enhanced Strategy BNE205 on the S&P GSCI Soybean Oil	AGGSBN05 <Index>		S&P GSCI Soybean Oil			
Enhanced Strategy CCE205 on S&P GSCI® Cocoa Index	AGGSCC05 <Index>		S&P GSCI® Cocoa Index			
Enhanced Strategy CCF3E205 on S&P GSCI®	AGGSCCC0 <Index>		S&P GSCI® Cocoa 3 Month Forward			

Cocoa 3 Month Forward Index			Index			
Enhanced Strategy CCF6E205 on the S&P GSCI Cocoa 6 Month Forward	AGGSCCE 6 <Index>		S&P GSCI Cocoa 6 Month Forward			
Enhanced Strategy CLE205 on S&P GSCI® Crude Oil Index	AGGSCL0 5 <Index>		S&P GSCI® Crude Oil Index			
Enhanced Strategy CLF1E205 on the S&P GSCI Crude Oil 1 Month Forward	AGGSCLE 1 <Index>		S&P GSCI Crude Oil 1 Month Forward			
Enhanced Strategy CLF3E205 on S&P GSCI® Crude Oil 3 Month Forward Index	AGGSCLC 0 <Index>		S&P GSCI® Crude Oil 3 Month Forward Index			
Enhanced Strategy CLF6E205 on S&P GSCI® Crude Oil 6 Month Forward Index	AGGSCLE 6 <Index>		S&P GSCI® Crude Oil 6 Month Forward Index			
Enhanced Strategy CNE205 on S&P GSCI® Corn Index	AGGSCN0 5 <Index>		S&P GSCI® Corn Index			
Enhanced Strategy CNF3E205 on S&P GSCI® Corn 3 Month Forward Index	AGGSCNC 0 <Index>		S&P GSCI® Corn 3 Month Forward Index			
Enhanced Strategy CNF6E205 on S&P GSCI® Corn 6 Month Forward Index	AGGSCNE 6 <Index>		S&P GSCI® Corn 6 Month Forward Index			

Enhanced Strategy CTE205 on S&P GSCI® Cotton Index	AGGSCT05 <Index>		S&P GSCI® Cotton Index			
Enhanced Strategy CTF3E205 on S&P GSCI® Cotton 3 Month Forward Index	AGGSCTC0 <Index>		S&P GSCI® Cotton 3 Month Forward Index			
Enhanced Strategy CTF6E205 on S&P GSCI® Cotton 6 Month Forward Index	AGGSCTE6 <Index>		S&P GSCI® Cotton 6 Month Forward Index			
Enhanced Strategy FCE205 on S&P GSCI® Feeder Cattle Index	AGGSFC05 <Index>		S&P GSCI® Feeder Cattle Index			
Enhanced Strategy FCF3E205 on S&P GSCI® Feeder Cattle 3 Month Forward Index	AGGSFCC0 <Index>		S&P GSCI® Feeder Cattle 3 Month Forward Index			
Enhanced Strategy FCF6E205 on S&P GSCI® Feeder Cattle 6 Month Forward Index	AGGSFCE6 <Index>		S&P GSCI® Feeder Cattle 6 Month Forward Index			
Enhanced Strategy GDE205 on S&P GSCI® Gold Index	AGGSGD05 <Index>		S&P GSCI® Gold Index			
Enhanced Strategy GDF3E205 on S&P GSCI® Gold 3 Month Forward Index	AGGSGD C0 <Index>		S&P GSCI® Gold 3 Month Forward Index			
Enhanced Strategy GDF6E205 on the S&P GSCI	AGGSGDE6 <Index>		S&P GSCI Gold 6 Month Forward			

Gold 6 Month Forward						
Enhanced Strategy GOE205 on S&P GSCI® Gasoil Index	AGGSGO05 <Index>		S&P GSCI® Gasoil Index			
Enhanced Strategy GOF3E205 on S&P GSCI® Gasoil 3 Month Forward Index	AGGSGOC0 <Index>		S&P GSCI® Gasoil 3 Month Forward Index			
Enhanced Strategy GOF6E205 on S&P GSCI® Gasoil 6 Month Forward Index	AGGSGOE6 <Index>		S&P GSCI® Gasoil 6 Month Forward Index			
Enhanced Strategy HGCE205 on S&P GSCI® North American Copper Index	AGGSHG05 <Index>		S&P GSCI® North American Copper Index			
Enhanced Strategy HOE205 on S&P GSCI® Heating Oil Index	AGGSHO05 <Index>		S&P GSCI® Heating Oil Index			
Enhanced Strategy HOF3E205 on S&P GSCI® Heating Oil 3 Month Forward Index	AGGSHOC0 <Index>		S&P GSCI® Heating Oil 3 Month Forward Index			
Enhanced Strategy HOF6E205 on S&P GSCI® Heating Oil 6 Month Forward Index	AGGSHOE6 <Index>		S&P GSCI® Heating Oil 6 Month Forward Index			
Enhanced Strategy HUE205 on S&P GSCI® Unleaded Gasoline	AGGSHU05 <Index>		S&P GSCI® Unleaded Gasoline Index			

Index						
Enhanced Strategy HUF3E205 on S&P GSCI® Unleaded Gasoline 3 Month Forward Index	AGGSHUC 0 <Index>		S&P GSCI® Unleaded Gasoline 3 Month Forward Index			
Enhanced Strategy HUF6E205 on S&P GSCI® Unleaded Gasoline 6 Month Forward Index	AGGSHUE 6 <Index>		S&P GSCI® Unleaded Gasoline 6 Month Forward Index			
Enhanced Strategy IAE205 on S&P GSCI® Aluminum Index	AGGSIA05 <Index>		S&P GSCI® Aluminum Index			
Enhanced Strategy IAF3E205 on S&P GSCI® Aluminum 3 Month Forward Index	AGGSIAC 0 <Index>		S&P GSCI® Aluminum 3 Month Forward Index			
Enhanced Strategy IAF6E205 on S&P GSCI® Aluminum 6 Month Forward Index	AGGSIAE6 <Index>		S&P GSCI® Aluminum 6 Month Forward Index			
Enhanced Strategy ICE205 on S&P GSCI® Copper Index	AGGSIC05 <Index>		S&P GSCI® Copper Index			
Enhanced Strategy ICF3E205 on S&P GSCI® Copper 3 Month Forward Index	AGGSICC 0 <Index>		S&P GSCI® Copper 3 Month Forward Index			
Enhanced Strategy ICF6E205 on	AGGSICE 6 <Index>		S&P GSCI® Copper 6 Month			

S&P GSCI® Copper 6 Month Forward Index			Forward Index		
Enhanced Strategy IKE205 on S&P GSCI® Nickel Index	AGGSIK05 <Index>		S&P GSCI® Nickel Index		
Enhanced Strategy IKF3E205 on S&P GSCI® Nickel 3 Month Forward Index	AGGSIKC0 <Index>		S&P GSCI® Nickel 3 Month Forward Index		
Enhanced Strategy IKF6E205 on S&P GSCI® Nickel 6 Month Forward Index	AGGSIKE6 <Index>		S&P GSCI® Nickel 6 Month Forward Index		
Enhanced Strategy ILE205 on S&P GSCI® Lead Index	AGGSIL05 <Index>		S&P GSCI® Lead Index		
Enhanced Strategy ILF3E205 on S&P GSCI® Lead 3 Month Forward Index	AGGSILC0 <Index>		S&P GSCI® Lead 3 Month Forward Index		
Enhanced Strategy ILF6E205 on S&P GSCI® Lead 6 Month Forward Index	AGGSILE6 <Index>		S&P GSCI® Lead 6 Month Forward Index		
Enhanced Strategy IZE205 on S&P GSCI® Zinc Index	AGGSIZ05 <Index>		S&P GSCI® Zinc Index		
Enhanced Strategy IZF3E205 on S&P GSCI® Zinc 3 Month Forward Index	AGGSIZC0 <Index>		S&P GSCI® Zinc 3 Month Forward Index		
Enhanced Strategy	AGGSIZE6		S&P GSCI® Zinc 6 Month		

IZF6E205 on S&P GSCI® Zinc 6 Month Forward Index	<Index>		Forward Index		
Enhanced Strategy KCE205 on S&P GSCI® Coffee Index	AGGSKC05 <Index>		S&P GSCI® Coffee Index		
Enhanced Strategy KCF3E205 on S&P GSCI® Coffee 3 Month Forward Index	AGGSKCC0 <Index>		S&P GSCI® Coffee 3 Month Forward Index		
Enhanced Strategy KCF6E205 on S&P GSCI® Coffee 6 Month Forward Index	AGGSKCE6 <Index>		S&P GSCI® Coffee 6 Month Forward Index		
Enhanced Strategy KWE205 on S&P GSCI® Kansas Wheat Index	AGGSKW05 <Index>		S&P GSCI® Kansas Wheat Index		
Enhanced Strategy KWF3E205 on S&P GSCI® Kansas Wheat 3 Month Forward Index	AGGSKWC0 <Index>		S&P GSCI® Kansas Wheat 3 Month Forward Index		
Enhanced Strategy KWF6E205 on the S&P GSCI Kansas Wheat 6 Month Forward	AGGSKWE6 <Index>		S&P GSCI Kansas Wheat 6 Month Forward		
Enhanced Strategy LCE205 on S&P GSCI® Live Cattle Index	AGGSLC05 <Index>		S&P GSCI® Live Cattle Index		
Enhanced Strategy LCF3E205 on	AGGSLCC0 <Index>		S&P GSCI® Live Cattle 3 Month		

S&P GSCI® Live Cattle 3 Month Forward Index			Forward Index			
Enhanced Strategy LCF6E205 on S&P GSCI® Live Cattle 6 Month Forward Index	AGGSLCE 6 <Index>		S&P GSCI® Live Cattle 6 Month Forward Index			
Enhanced Strategy LHE205 on S&P GSCI® Lean Hogs Index	AGGSLH0 5 <Index>		S&P GSCI® Lean Hogs Index			
Enhanced Strategy LHF3E205 on S&P GSCI® Lean Hogs 3 Month Forward Index	AGGSLHC 0 <Index>		S&P GSCI® Lean Hogs 3 Month Forward Index			
Enhanced Strategy LHF6E205 on S&P GSCI® Lean Hogs 6 Month Forward Index	AGGSLHE 6 <Index>		S&P GSCI® Lean Hogs 6 Month Forward Index			
Enhanced Strategy NGE205 on S&P GSCI® Natural Gas Index	AGGSNG0 5 <Index>		S&P GSCI® Natural Gas Index			
Enhanced Strategy NGF3E205 on S&P GSCI® Natural Gas 3 Month Forward Index	AGGSNG C0 <Index>		S&P GSCI® Natural Gas 3 Month Forward Index			
Enhanced Strategy NGF6E205 on S&P GSCI® Natural Gas 6 Month Forward Index	AGGSNGE 6 <Index>		S&P GSCI® Natural Gas 6 Month Forward Index			

Enhanced Strategy SBE205 on S&P GSCI® Sugar Index	AGGSSB05 <Index>		S&P GSCI® Sugar Index			
Enhanced Strategy SBF3E205 on S&P GSCI® Sugar 3 Month Forward Index	AGGSSBC0 <Index>		S&P GSCI® Sugar 3 Month Forward Index			
Enhanced Strategy SBF6E205 on S&P GSCI® Sugar 6 Month Forward Index	AGGSSBE6 <Index>		S&P GSCI® Sugar 6 Month Forward Index			
Enhanced Strategy SIE205 on S&P GSCI® Silver Index	AGGSSI05 <Index>		S&P GSCI® Silver Index			
Enhanced Strategy SIF3E205 on S&P GSCI® Silver 3 Month Forward Index	AGGSSIC0 <Index>		S&P GSCI® Silver 3 Month Forward Index			
Enhanced Strategy SIF6E205 on the S&P GSCI Silver 6 Month Forward	AGGSSIE6 <Index>		S&P GSCI Silver 6 Month Forward			
Enhanced Strategy SME205 on the S&P GSCI Soybean Meal	AGGSSM05 <Index>		S&P GSCI Soybean Meal			
Enhanced Strategy SOE205 on S&P GSCI® Soybeans Index	AGGSSO05 <Index>		S&P GSCI® Soybeans Index			
Enhanced Strategy SOF3E205 on S&P GSCI® Soybeans 3 Month Forward	AGGSSOC0 <Index>		S&P GSCI® Soybeans 3 Month Forward Index			

Index					
Enhanced Strategy SOF6E205 on S&P GSCI® Soybeans 6 Month Forward Index	AGGSSOE 6 <Index>		S&P GSCI® Soybeans 6 Month Forward Index		
Enhanced Strategy WHE205 on S&P GSCI® Wheat Index	AGGSWH 05 <Index>		S&P GSCI® Wheat Index		
Enhanced Strategy WHF3E205 on S&P GSCI® Wheat 3 Month Forward Index	AGGSWH C0 <Index>		S&P GSCI® Wheat 3 Month Forward Index		
Enhanced Strategy WHF6E205 on S&P GSCI® Wheat 6 Month Forward Index	AGGSWH E6 <Index>		S&P GSCI® Wheat 6 Month Forward Index		
Enhanced Strategy BNF3E205 on the S&P GSCI Soybean Oil	AGGSBNC 0 <Index>		S&P GSCI Soybean Oil	Soybean Oil	CBOT	K N N Z Z Z Z F* H* H* K*
Enhanced Strategy BNF6E205 on the S&P GSCI Soybean Oil	AGGSBNE 6 <Index>		S&P GSCI Soybean Oil	Soybean Oil	CBOT	Z Z Z Z Z F* H* H* K* K* N* N*
Enhanced Strategy HGF3E205 on S&P GSCI® North American Copper Index	AGGSHG C0 <Index>		S&P GSCI® North American Copper	Copper	CMX	K N N U U Z Z Z H* H* H* K*
Enhanced Strategy HGF6E205 on S&P GSCI® North American Copper Index	AGGSHGE 6 <Index>		S&P GSCI® North American Copper	Copper	CMX	U U Z Z Z H* H* H* K* K* N* N*
Enhanced Strategy SMF3E205 on the S&P GSCI	AGGSSM C0 <Index>		S&P GSCI Soybean Meal	Soybean Meal	CBOT	K N N Z Z Z Z F* H* H* K*

Soybean Meal						
Enhanced Strategy SMF6E205 on the S&P GSCI Soybean Meal	AGGSSME 6 <Index>		S&P GSCI Soybean Meal	Soybean Meal	CBOT	Z Z Z Z Z F* H* H* K* K* N* N*
Enhanced Strategy CNS1 on the S&P GSCI Corn	AGGSCNS 1 <Index>		S&P GSCI Corn	Corn	CBT	H H K K U U U U Z Z Z H*
Enhanced Strategy CNS2 on the S&P GSCI Corn	AGGSCNS 2 <Index>		S&P GSCI Corn	Corn	CBT	K K N N Z Z Z Z H* H* H* K*
Enhanced Strategy CTS1 on the S&P GSCI Cotton	AGGSCTS 1 <Index>		S&P GSCI Cotton	Cotton	ICE - US	H H K K Z Z Z Z Z Z H*
Enhanced Strategy CTS2 on the S&P GSCI Cotton	AGGSCTS 2 <Index>		S&P GSCI Cotton	Cotton	ICE - US	K K N N H* H* H* H* H* H* H* K*
Enhanced Strategy GOS1 on the S&P GSCI Gasoil	AGGSGO S1 <Index>		S&P GSCI Gasoil	Gasoil	ICE - UK	J J J K M N Q U Z Z Z J*
Enhanced Strategy GOS2 on the S&P GSCI Gasoil	AGGSGO S2 <Index>		S&P GSCI Gasoil	Gasoil	ICE - UK	N N N Q U V X X H* H* H* N*
Enhanced Strategy HOS1 on the S&P GSCI Heating Oil	AGGSHOS 1 <Index>		S&P GSCI Heating Oil	Heating Oil	NYM	J J J K M N Q U Z Z Z J*
Enhanced Strategy HOS2 on the S&P GSCI Heating Oil	AGGSHOS 2 <Index>		S&P GSCI Heating Oil	Heating Oil	NYM	N N N Q U V X X H* H* H* N*
Enhanced Strategy HUS1 on the S&P GSCI Unl Gasoline	AGGSHUS 1 <Index>		S&P GSCI Unl Gasoline	RBOB Gasoline	NYM	J J J K M V V V V X Z J*
Enhanced Strategy HUS2 on the S&P GSCI Unl	AGGSHUS 2 <Index>		S&P GSCI Unl Gasoline	RBOB Gasoline	NYM	N N N Q U F* F* F* F* G* H* N*

Gasoline						
Enhanced Strategy LCS1 on the S&P GSCI Live Cattle	AGGSLCS 1 <Index>		S&P GSCI Live Cattle	Live Cattle	CME	G M M M M Q Q Z Z Z Z G*
Enhanced Strategy LCS2 on the S&P GSCI Live Cattle	AGGSLCS 2 <Index>		S&P GSCI Live Cattle	Live Cattle	CME	J Q Q Q Q V V G* G* G* G* J*
Enhanced Strategy LHS1 on the S&P GSCI Lean Hogs	AGGSLHS 1 <Index>		S&P GSCI Lean Hogs	Lean Hogs	CME	G M M M M V V V V Z Z G*
Enhanced Strategy LHS2 on the S&P GSCI Lean Hogs	AGGSLHS 2 <Index>		S&P GSCI Lean Hogs	Lean Hogs	CME	J Q Q Q Q Z Z Z Z G* G* J*
Enhanced Strategy NGS1 on the S&P GSCI Natural Gas	AGGSNGS 1 <Index>		S&P GSCI Natural Gas	Natural Gas	NYM / ICE	J J J K M N Q U Z F* G* J*
Enhanced Strategy NGS2 on the S&P GSCI Natural Gas	AGGSNGS 2 <Index>		S&P GSCI Natural Gas	Natural Gas	NYM / ICE	N N N Q U V X X F* G* H* N*
Enhanced Strategy SOS1 on the S&P GSCI Soybeans	AGGSSOS 1 <Index>		S&P GSCI Soybeans	Soybeans	CBT	H H K K X X X X X X F* F*
Enhanced Strategy SOS2 on the S&P GSCI Soybeans	AGGSSOS 2 <Index>		S&P GSCI Soybeans	Soybeans	CBT	K K N N F* F* F* F* F* F* H* H*
Enhanced Strategy WHS1 on the S&P GSCI Wheat	AGGSWH S1 <Index>		S&P GSCI Wheat	Chicago Wheat	CBT	H H N N N N U U Z Z Z H*
Enhanced Strategy WHS2 on the S&P GSCI Wheat	AGGSWH S2 <Index>		S&P GSCI Wheat	Chicago Wheat	CBT	K K U U U U Z Z H* H* H* K*

Note that the "Designated Contract Expiration Schedule" is specified in the format of a list of 12 letters. Each of the 12 letters indicates the contract expirations out of which the Strategy rolls during the Roll Period corresponding to each of the 12 months starting with January.

Also note that (*) following any letter in the "Designated Contract Expiration Schedule" denotes expiration in the following year, (**) denotes expiration in the second following year, etc. For example, K* stands for May contract in the following year and H** stands for March contract in the second following year.

Month letter codes are shown in the Table 2 below

Table 2

Month	Letter Code
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

GOLDMAN SACHS GENERAL BASKET STRATEGY BASE DESCRIPTION

Version 5.0

Dated: 22 January 2020

1. **Introduction**

This documentation element, the Goldman Sachs General Basket Strategy Base Description, as may be amended from time to time (this "**General Basket Strategy Base Description**") comprises certain rules, methodology, definitions, disclaimers, conflicts of interest and other information applicable to certain notional rules-based proprietary strategies which Goldman Sachs International or its successor(s) (the "**Strategy Sponsor**") may create from time to time (each, a "**GS Strategy**" and together, the "**GS Strategies**").

The most recently published version of the Goldman Sachs General Index Provisions (as updated from time to time, the "**General Index Provisions**") are incorporated into and shall apply to, and must be read together with, this documentation element.

For the purposes of applying the General Index Provisions to this documentation element, each expression in the General Index Provisions set out in the column of the table below entitled "Reference in the General Index Provisions" shall be read and construed for the purposes of this documentation element as a reference to the word or expression appearing in the same row in the table in the column entitled "Reference in this documentation element":

	Reference in the General Index Provisions	Reference in this documentation element
1.	"Index"	"Strategy"
2.	"Index Business Day"	"Strategy Calculation Day"
3.	"Index Component"	"Component"
4.	"Index Calculation Agent"	"Strategy Calculation Agent"
5.	"Disruption Event"	Each of the "Exchange Rate Disruption Event", "Force Majeure Event", "Market Disruption Event" and "Non-Tradable Event"
6.	"Index Sponsor"	"Strategy Sponsor"

This General Basket Strategy Base Description should also be read in conjunction with the relevant description (the "**Relevant General Strategy Description**") comprising certain other rules, methodology, definitions and other information applicable to a particular GS Strategy, as well as any other documentation element(s) referred to in such Relevant General Strategy Description and/or in such other documentation elements (the "**Other Relevant Strategy Documentation Elements**"), in each case, where such documentation element is specified to be applicable to such GS Strategy.

This General Basket Strategy Base Description, together with the General Index Provisions, a Relevant General Strategy Description and any Other Relevant Strategy Documentation Elements will constitute the "**Strategy Rules**" in respect of a particular GS Strategy.

2. **The GS Strategy**

The GS Strategy consists of certain "**immediate components**". Each immediate component is either designated as a "**terminal component**" or a "**non-terminal component**".

The purpose of this General Basket Strategy Base Description is to describe (i) how the size of the exposure (represented by the number of units) of each immediate component and each terminal component to which a GS Strategy is exposed is determined, and in turn, (ii) how the level of a GS Strategy is calculated by reference to the levels of the terminal components included in such GS Strategy and the number of units of such terminal

components included in such GS Strategy on any day, as well as the impact of any transaction costs and/or servicing costs which may be applicable in respect of the terminal components included in a GS Strategy and/or any servicing costs which may be applicable in respect of the GS Strategy. The identity of the immediate components and the determination of the immediate component weights are as specified or described in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements. Information relating to any terminal component which is included in the GS Strategy as constituent parts of a non-terminal component shall be set out in the relevant rules in respect of such non-terminal component, unless otherwise specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements of the GS Strategy.

Section B: Calculation of the Strategy Tradable Level and Strategy Timely Level

The level (the "**Strategy Tradable Level**") of a GS Strategy in respect of each Strategy Calculation Day will depend on the daily mark-to-market change in the value of the position in each Terminal Component included in such GS Strategy. The Strategy Tradable Level of each GS Strategy will be calculated by Strategy Calculation Agent in accordance with paragraph 1 of this Section B: *Calculation of the Strategy Tradable Level and Strategy Timely Level*.

Unless "Strategy Floored at Zero" is specified to be "Not Applicable" in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, the Strategy Tradable Level shall be floored at zero, meaning that if the methodology set out in this Section B: *Calculation of the Strategy Tradable Level and Strategy Timely Level* would otherwise result in a Strategy Tradable Level on a Strategy Calculation Day *t* of less than zero, the Strategy Tradable Level shall be deemed to be zero on such Strategy Calculation Day *t* and all subsequent Strategy Calculation Days. If "Strategy Floored at Zero" is specified to be "Not Applicable" the Strategy Tradable Level may be negative on any Strategy Calculation Day, and in respect of each Reference Date on which the Strategy Timely Level is less than or equal to zero, the units of all Immediate Components (and therefore the value of the positions of all Terminal Components) included in the GS Strategy will be equal to zero on the Rebalancing Date corresponding to such Reference Date. Consequently, if the Strategy Tradable Level continues to be less than or equal to zero for a prolonged period of time, the value of the position in all Terminal Components will continue to be zero and the Strategy Tradable Level will become static at or below zero.

If a Non-Tradable Event occurs on any Strategy Calculation Day *t* in respect of the GS Strategy, the Strategy Calculation Agent will not be able to calculate the Strategy Tradable Level in respect of such Strategy Calculation Day *t* until a later date. Therefore, the Strategy Calculation Agent will also calculate a level (the "**Strategy Timely Level**") of a GS Strategy in respect of each Strategy Calculation Day. The Strategy Timely Level will be calculated by the Strategy Calculation Agent in accordance with paragraph 2 of this Section B: *Calculation of the Strategy Tradable Level and Strategy Timely Level.*

1. Calculation of the Strategy Tradable Level for a GS Strategy

In respect of a GS Strategy, the Strategy Tradable Level in respect of (i) the Strategy Inception Date shall be equal to the Initial Strategy Level, and (ii) each Strategy Calculation Day *t* following the Strategy Inception Date shall be calculated by the Strategy Calculation Agent in accordance with the following formula:

$$S_t = S_{t-1} \times (1 + OIR_{\tilde{t}} \times DCF_t) + \left[\sum_c \left(FX_t(c) \times \left(V_{t,t-1}(c) - V_{t-1,t-1}(c) \right) \right) \right] - \text{Total Costs}_t$$

Where the summation is taken over each Terminal Component *c* included in the GS Strategy on Strategy Calculation Day *t-1* or Strategy Calculation Day *t*, and:

"**DCF$_t$**" or the "**Overnight Interest Rate Day Count Fraction$_t$**" means, in respect of a Strategy Calculation Day *t*, the Overnight Interest Rate Day Count Fraction in respect of the period commencing on, and including, Strategy Calculation Day *t-1* and ending on, but excluding, Strategy Calculation Day *t;*

"**FX$_t$(c)**" means the Tradable Level of the Currency Conversion Component in respect of Terminal Component *c* and Strategy Calculation Day *t;*

"**OIR$_{\tilde{t}}$**" means the Overnight Interest Rate in respect of the earlier of (A) Strategy Calculation Day t-1 and (B) the second last Overnight Interest Rate Business Day that falls prior to or on Strategy Calculation Day t, provided that if no Overnight Interest Rate Data Source is specified in the Relevant Specifications Annex, the Overnight Interest Rate shall be zero;

"**S$_t$**" means the Strategy Tradable Level in respect of Strategy Calculation Day *t;*

"**Total Costs$_t$**" means, in respect of a Strategy Calculation Day *t*, an amount determined by the Strategy Calculation Agent in accordance with the following formula:

$$\text{Total Costs}_t = TC_t + \left[\sum_c SC_t(c) \right] + SSC_t$$

Where the summation is taken over each Terminal Component *c* included in the GS Strategy on Strategy Calculation Day *t*, and:

"**SC$_t$(c)**" means the servicing costs in respect of Terminal Component *c* in respect of Strategy Calculation Day *t*, as determined by the Strategy Calculation Agent in accordance with the following formula:

$$SC_t(c) = Abs(FX_{t-1}(c) \times SCWM_{t-1}(c) \times U_{t-1}(c)) \times SCR(c) \times \frac{days}{365}$$

Where:

"**Abs(x)**" is the absolute value function evaluated for the number *x*;

"**FX$_{t-1}$(c)**" means the Tradable Level of the Currency Conversion Component in respect of Terminal Component *c* and Strategy Calculation Day *t-1*;

"**SCR(c)**" means the Servicing Cost Rate in respect of Terminal Component *c*;

"**days**" means the number of calendar days falling in the period commencing on, and including, Strategy Calculation Day *t-1* and ending on, but excluding, Strategy Calculation Day *t*;

"**L$_{t-1}$(c)**" means the Tradable Level of Terminal Component *c* in respect of Strategy Calculation Day *t-1*;

"**SCWM$_{t-1}$(c)**" means, (i) if a Servicing Cost Weight Multiplier in respect of Terminal Component *c* in respect of Strategy Calculation Day *t-1* is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, such Servicing Cost Weight Multiplier, or (ii) if no Servicing Cost Weight Multiplier is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, $L_{t-1}(c)$; and

"**U$_{t-1}$(c)**" means the Units of Terminal Component *c* in respect of Strategy Calculation Day *t-1*.

"**SSC$_t$**" means the strategy servicing costs in respect of Strategy Calculation Day *t*, as determined by the Strategy Calculation Agent in accordance with the following formula:

$$SSC_t = Abs(S_{t-1}) \times SSCR \times \frac{days}{365}$$

Where:

"**Abs(x)**" is the absolute value function evaluated for the number *x*;

"**days**" means the number of calendar days falling in the period commencing on, and including, Strategy Calculation Day *t-1* and ending on, but excluding, Strategy Calculation Day *t*;

"**S$_{t-1}$**" means the Strategy Tradable Level in respect of Strategy Calculation Day *t-1*;

"**SSCR**" means the Strategy Servicing Cost Rate;

"**TC$_t$**" means, in respect of Strategy Calculation Day *t*, the aggregate of the transaction costs in respect of each Transaction Cost Class, as determined by the Strategy Calculation Agent in accordance with the following formula:

$$TC_t = \sum_{cc} TC_t(cc)$$

Where the summation is taken over each Transaction Cost Class relating to the Terminal Components included in the GS Strategy on Strategy Calculation Day *t*, and:

"**TC$_t$(cc)**" means the transaction costs in respect of Transaction Cost Class *cc* and Strategy Calculation Day *t*, as determined by the Strategy Calculation Agent in accordance with the following formula:

$$TC_t(cc) = TCR(cc) \times Abs\left(\sum_c FX_t(c) \times TCWM_t(c, cc) \times (U_t(c) - U_{t-1}(c))\right)$$

Where the summation is taken over each Terminal Component *c* which is a part of Transaction Cost Class *cc* on Strategy Calculation Day *t-1* or *t*; and:

"**Abs(x)**" is the absolute value function evaluated for the number *x*;

"**FX$_t$(c)**" means the Tradable Level of the Currency Conversion Component in respect of Terminal Component *c* and Strategy Calculation Day *t*;

"**TCR(cc)**" means the Transaction Cost Rate in respect of Transaction Cost Class *cc*;

"**TCWM$_t$(c,cc)**" means the Transaction Cost Weight Multiplier in respect of Transaction Cost Class *cc* and Terminal Component *c* on Strategy Calculation Day *t*;

"**U$_t$(c)**" means the Units of Terminal Component *c* in respect of Strategy Calculation Day *t*; and

"**U$_{t-1}$(c)**" means the Units of Terminal Component *c* in respect of Strategy Calculation Day *t-1*.

"**t-1**" means the Strategy Calculation Day preceding Strategy Calculation Day *t*; and

"**V$_{t,s}$(c)**" means the value of the position in Terminal Component *c*, valued using the Tradable Level of Terminal Component *c* in respect of a Strategy Calculation Day *t* and the Units of Terminal Component *c* on Strategy Calculation Day *s*, as determined by the Strategy Calculation Agent in accordance with the following formula:

$$V_{t,s}(c) = L_t(c) \times U_s(c)$$

Where:

"**L$_t$(c)**" means the Tradable Level of Terminal Component *c* in respect of Strategy Calculation Day *t*; and

"**U$_s$(c)**" means the Units of Terminal Component *c* in respect of Strategy Calculation Day *s*.

2. Calculation of the Strategy Timely Level for a GS Strategy

The Strategy Calculation Agent will calculate the Strategy Timely Level of a GS Strategy on each Strategy Calculation Day *t* as follows:

(i)   if no Non-Tradable Event occurs in respect of the GS Strategy on such Strategy Calculation Day *t*, the Strategy Timely Level shall be equal to the Strategy Tradable Level in respect of such Strategy Calculation Day *t*; or

(ii)   if a Non-Tradable Event occurs in respect of the GS Strategy on such Strategy Calculation Day *t*, the Strategy Timely Level will be calculated using the same methodology for calculating the Strategy Tradable Level, save that (a) the Timely Level of each Terminal Component (and the Currency Conversion Component in respect of such Terminal Component) shall be used in place of its Tradable Level, and (b) each reference to "Strategy Tradable Level" in paragraph 1 of this Section B: *Calculation of the Strategy Tradable Level and Strategy Timely Level* shall be deemed to be replaced with "Strategy Timely Level".

3. Publication of the GS Strategy

If so specified in the Relevant General Strategy Description or the Other Relevant Strategy Documentation Elements, the Strategy Calculation Agent will publish the Strategy Timely Level and/or the Strategy Tradable Level on the Strategy Publication Data Source.

If a Strategy Value Publication Precision is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, the Strategy Timely Level and/or the Strategy Tradable Level will be published to the number of significant figures equal to such Strategy Value Publication Precision.

Section C: Calculation of the number of Units of a Terminal Component

A GS Strategy will provide exposure to each Terminal Component included in such GS Strategy, by notionally entering into a position (which may be "long" or "short") in such Terminal Component. A GS Strategy's quantity of exposure to a particular Terminal Component is called the number of units ("**Units**") of such Terminal Component. In order to calculate the Units of each Terminal Component, the Strategy Calculation Agent will first calculate the number of units (the "**Immediate Units**") of each Immediate Component (which may be a Terminal Component or a Non-Terminal Component) in accordance with paragraph 1 of this Section C: *Calculation of the number of Units of a Terminal Component*. Thereafter, the Strategy Calculation Agent will calculate the Units of each Terminal Component by reference to the Immediate Units of the relevant Immediate Component(s) in accordance with paragraph 2 of this Section C: *Calculation of the number of Units of a Terminal Component*.

1.   **Calculation of the Immediate Units of an Immediate Component**

The "Immediate Units" of an Immediate Component *ic* included in a GS Strategy in respect of (i) each Strategy Calculation Day falling in the period commencing on, and including, the Strategy Inception Date and ending on, but excluding, the immediately following Rebalancing Date, shall be equal to zero and (ii) each Strategy Calculation Day *t* other than a Strategy Calculation Day mentioned in (i) above shall be determined by the Strategy Calculation Agent in accordance with the following formula:

$$IU_t(ic) = \sum_r Units_{t,r}(ic)$$

Where the summation is taken over each Rebalancing Date *r* falling on or prior to Strategy Calculation Day *t*, and where:

"**Units$_{t,r}$(ic)**" means the units of Immediate Component *ic* on Strategy Calculation Day *t* in respect of Rebalancing Date *r* falling on or prior to Strategy Calculation Day *t*, as determined by the Strategy Calculation Agent in accordance with the following formula:

$$Units_{t,r}(ic) = \left(\frac{ICW_r(ic)}{Holding\ Period\ Rebalancing\ Days} \times \frac{S_{RefDate(r)}}{USF_{RefDate(r)}(ic) \times FX_{RefDate(r)}(ic)} \times \frac{FI_{r,ic}(t) - FO_{r,ic}(t)}{NumFadeDays} \right)$$

provided that if L$_{RefDat(r)}$(ic) is less than or equal to zero, then Units$_{t,r}$(ic) shall be deemed to be zero, and:

"**FI$_{r,ic}$(t)**" means the number of Fade-In Days in respect of Rebalancing Date *r* and Immediate Component *ic* falling on or prior to Strategy Calculation Day *t*;

"**FO$_{r,ic}$(t)**" means the number of Fade-Out Days in respect of Rebalancing Date *r* and Immediate Component *ic* falling on or prior to Strategy Calculation Day *t*;

"**FX$_{RefDate(r)}$(ic)**" means the Timely Level of the Currency Conversion Component in respect of Immediate Component *ic* and RefDate(r);

"**Holding Period Rebalancing Days**" means one (1), or if a positive integer is specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, such positive integer;

"**ICW$_r$(ic)**" means the Immediate Component Weight in respect of Immediate Component *ic* determined in respect of Rebalancing Date *r*;

"**IU$_t$(ic)**" means the Immediate Units of Immediate Component *ic* in respect of Strategy Calculation Day *t*;

"**USF$_{RefDate(r)}$(ic)**" means, if (i) a Units Scaling Factor is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, such Units Scaling Factor, or (ii) no Units Scaling Factor is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, L$_{RefDate(r)}$(ic);

"**L$_{RefDate(r)}$(ic)**" means the Timely Level of Immediate Component *ic* in respect of RefDate(r);

"**NumFadeDays**" or "**Number of Fading Days**" means one (1), or if a positive integer is specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, such positive integer;

"**RefDate(r)**" means the Reference Date in respect of Rebalancing Date r; and

"**S$_{RefDate}$(r)**" means the Strategy Timely Level in respect of RefDate(r), or if such Strategy Timely Level is negative, then zero (0).

2.   Calculation of the Units of a Terminal Component

The Units of a Terminal Component c included in a GS Strategy in respect of Strategy Calculation Day t will be determined by the Strategy Calculation Agent in accordance with the following formula:

$$U_t(c) = \sum_{ic} IU_t(ic) \times U_{ic,t}(c)$$

Where the summation is over each Immediate Component ic included in such GS Strategy, and where:

"**IU$_t$(ic)**" means the Immediate Units of Immediate Component ic in respect of Strategy Calculation Day t;

"**U$_{ic,t}$(c)**" means the Units of Terminal Component c included in Immediate Component ic in respect of Strategy Calculation Day t, as determined by the Strategy Calculation Agent in accordance with the following paragraphs:

(i)   if Terminal Component c is Immediate Component ic, one; or

(ii)   if Terminal Component c is a Terminal Component included in Immediate Component ic, then the Units of Terminal Component c included in Immediate Component ic in respect of Strategy Calculation Day t, as determined in accordance with the relevant rules in respect of Immediate Component ic; or

(iii)   otherwise, zero; and

"**U$_t$(c)**" means the Units of Terminal Component c in respect of Strategy Calculation Day t.

Section D: Associated Immediate Components

In respect of each GS Strategy for which an Immediate Component Template is specified in the Relevant General Strategy Description or the Other Relevant Strategy Documentation Elements, on each Strategy Calculation Day such GS Strategy will notionally hold long positions (by assigning a positive weight) and/or notionally hold short positions (by assigning a negative weight) in each Associated Immediate Component defined by such Immediate Component Template.

On any Strategy Calculation Day an Immediate Component Template will define a set of Associated Immediate Components (the "**Associated Immediate Component Set**" in respect of such Immediate Component Template and such Strategy Calculation Day) and such Immediate Component Template will include all of the specifications required to define each Associated Immediate Component belonging to such Associated Immediate Component Set. Each Associated Immediate Component will be deemed to be included in such GS Strategy with effect from the Execution Start Date in respect of a particular Rebalancing Date (the "**Associated Immediate Component Start Date**" in respect of such Associated Immediate Component) and will cease to be an Associated Immediate Component after the Last Fade-Out Day in respect of such Rebalancing Date and the Immediate Component Template corresponding to such Associated Immediate Component. As a result, the Associated Immediate Components included in an Associated Immediate Component Set and a GS Strategy will vary over time.

Where any variable or characteristic is to be specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of an Immediate Component, such variable or characteristic may be specified in respect of an Immediate Component Template and such variable or characteristic so specified will apply to each Associated Immediate Component in the relevant Associated Immediate Component Set.

Section E: Consequences of Adjustment Events

1. **Strategy Adjustment Events relating to a GS Strategy**

If, in respect of a GS Strategy and any Strategy Calculation Day, a Strategy Adjustment Event has occurred, then the Strategy Sponsor may determine, in its discretion and acting in a commercially reasonable manner, to make such determinations or adjustments to the terms of such GS Strategy, including to the methodology and/or to replace the relevant data sources, as it deems appropriate to account for such Strategy Adjustment Event and, as applicable, to the extent necessary to calculate the Strategy Timely Level and the Strategy Tradable Level in respect of such Strategy Calculation Day (for which purpose it may use its own internal models and other market data sources as it reasonably determines is necessary) whilst preserving the intended commercial purpose of the GS Strategy.

If the Strategy Sponsor determines that no such determination(s) or adjustment(s) would achieve a commercially reasonable result and/or that it is no longer possible or practicable to calculate the level of the GS Strategy, the Strategy Sponsor may terminate the calculation and the publication of the GS Strategy without notice.

2. **Adjustment Events relating to Components**

(i)   If any Component is:

(a)   not calculated and announced by the relevant Sponsor or Price Source, as the case may be, for such Component, but is calculated and announced by a successor sponsor or price source acceptable to the Strategy Sponsor, then such successor sponsor or price source, as the case may be, will be deemed to be that Sponsor or Price Source; or

(b)   replaced by a successor instrument, strategy, index or basket, as applicable, using the same or a substantially similar specification or formula and method of calculation as used in the calculation of such Component, as determined by the Strategy Sponsor, then such replacement instrument, strategy, index or basket, as the case may be, will be deemed to be that Component,

and in each case, the Strategy Sponsor may make such adjustment(s) to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary, in its discretion and acting in a commercially reasonable manner.

(ii)   If, in respect of a Component that is an index or a strategy, and any Strategy Calculation Day, the Strategy Sponsor determines that:

(a)   the relevant Sponsor makes, in the reasonable judgment of the Strategy Sponsor, a material change in the weighting or composition of, formula for, or method of calculating such Component, as the case may be or in any other way materially modifies such Component (other than a modification prescribed in that formula or method relating to the weighting or composition of such Component or other routine events or modifications), effective on or after such Strategy Calculation Day; or

(b)   the relevant Sponsor fails or is not scheduled to calculate and announce the level of such Component on such Strategy Calculation Day, or, on or prior to such Strategy Calculation Day, such Component has ceased to be calculated by the relevant Sponsor, and has not been replaced by a successor index, strategy or basket; or

(c)   a Market Disruption Event occurs in respect of the Currency Cross of the relevant Currency Conversion Component on such Strategy Calculation Day; or

(d)   in the reasonable judgment of the Strategy Sponsor, the level of such Component on such Strategy Calculation Day contains a manifest error,

then the Strategy Sponsor shall calculate the level of such Component, in lieu of a published level for such Component using the same formula for, and method of, calculating the level of such Component last in effect prior to the occurrence of any of the circumstances described above (utilising any adjustment to such formula or method that the Strategy Sponsor determines to be commercially reasonable) or in the event that the Strategy Sponsor determines, in its reasonable judgment, that the occurrence of any of the foregoing circumstances could adversely affect the GS Strategy, it may (in good faith and acting in a commercially reasonable manner) elect to replace or remove (or assign a zero weight to) the relevant Component from the GS Strategy at the earliest possible opportunity as it determines to be commercially

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reasonable and make such other changes to the GS Strategy as may be necessary, in its commercially reasonable judgment, to effect such change.

(iii) If, in respect of an Instrument and any Strategy Calculation Day:

(a) the Strategy Sponsor determines that any Instrument has ceased to be published by the relevant Price Source, and has not been replaced by successor instrument;

(b) the Strategy Sponsor determines that there has been a material change (or it has been announced that a material change will be made) to (I) the content, composition or constitution of any Instrument, or (II) the formula for or method of calculating any Instrument Valuation Data, or (III) the delivery, expiry or settlement terms of such Instrument;

(c) the Strategy Sponsor, in its reasonable judgment, (I) determines that such Instrument has ceased to be a liquid, actively traded Instrument that is generally available for trading, or that such Instrument has been the subject of a Market Disruption Event for at least five consecutive Strategy Calculation Days (provided that the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, determine that for the purposes of determining the level of the GS Strategy on any Strategy Calculation Day, such event shall constitute a Non-Tradable Event in respect of such Instrument and in such case, the Strategy Sponsor will also calculate the level of the relevant Instrument or any Component to which such Instrument is linked on the First Tradable Date), or (II) anticipates that such Instrument or any Instrument Valuation Data, notwithstanding that it is available for trading, will cease to be liquid and actively traded or will be terminated or delisted by the relevant Price Source; or

(d) in respect of any Instrument defined in sub-section 3 (*Interest Rate Swaps Definitions*) of Section G: Asset Class Specific Definitions of this General Basket Strategy Base Description, the Strategy Sponsor, in its reasonable judgment, determines that (I) liquidity in transactions relating to such Instrument has moved (or anticipates that liquidity in transactions relating to such Instrument will move) from a clearing house or trading venue, as the case may be, on which such Instrument would generally be cleared or traded, as the case may be, to a different clearing house or trading venue, as the case may be, in accordance with market convention, (II) liquidity in transactions relating to such Instrument (as identified by the relevant Swap Conventions) has moved (or anticipates that liquidity in transactions relating to such Instrument will move) to transactions relating to other Instruments identified by one or more different Swap Conventions, in accordance with market convention, or (III) notwithstanding that such Instrument is and will continue to be available for trading, any Instrument Valuation Data, will (or may at a future date determined by the Strategy Sponsor in its discretion and acting in a commercially reasonable manner) cease to be an accurate reflection of the Swap Conventions with respect to such Instrument,

then the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, (A) make such determinations or adjustments to the terms of the GS Strategy, including to the methodology and relevant data sources, as it deems appropriate to account for such Adjustment Event and, as applicable, to the extent necessary for the Strategy Timely Level and the Strategy Tradable Level to continue to be calculated (for which purpose it may use its own internal models and other market data sources as it reasonably determines is necessary), or (B) elect to replace or remove (or, where applicable, assign a zero weight to) such Instrument or any Component to which such Instrument is linked from the GS Strategy at the earliest possible opportunity as it determines to be commercially reasonable in order for the Strategy Timely Level and the Strategy Tradable Level to continue to be calculated notwithstanding the relevant circumstances, and in such case, the Strategy Sponsor may make such adjustment(s) to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary, in its discretion and acting in a commercially reasonable manner, to reflect such change(s).

(iv) If, in respect of an Overnight Interest Rate and any Strategy Calculation Day, the Strategy Sponsor determines that a material change has been made (or it is announced that a material change will be made) to the formula for, or the method of, calculating such Overnight Interest Rate, then the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, elect to replace such Overnight Interest Rate from the GS Strategy at the earliest possible opportunity as it determines to be commercially reasonable in order for the Strategy Timely Level and the Strategy Tradable Level to continue to be calculated notwithstanding the relevant circumstances, and in such case, the Strategy Sponsor may make such adjustment(s) to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary, in its discretion and acting in a commercially reasonable manner, to reflect such change(s).

(v) If the level of a Component as published by the relevant Sponsor, the Instrument Valuation Data in respect of an Instrument, the Spot Exchange Rate in respect of any Currency Conversion Component or the Overnight Interest Rate, as the case may be, each as published by the relevant Price Source, on any

Strategy Calculation Day (for the purposes of this paragraph 2(v) a "**Relevant Day**") is subsequently corrected and the Strategy Sponsor determines that the correction is published or made available by the Sponsor or Price Source, as the case may be, on a timely basis on the immediately following Strategy Calculation Day, then such corrected level, price or rate, as the case may be, shall be deemed to be the relevant level, price or rate for the Relevant Day, and the Strategy Sponsor shall use the corrected level, price or rate as the case may be, in its calculation of the Strategy Timely Level or Strategy Tradable Level, as applicable.

3. Adjustments relating to third party information or data

If, in respect of any third party information or data relied on or which is used to determine, or which constitutes, any weight(s), signal(s) or other input used in the calculation of the GS Strategy (the "**Third Party Data**"):

(i) the Strategy Sponsor discovers, or is notified by the third party responsible for collecting, calculating, distributing or publishing such Third Party Data (the "**Third Party Data Source**") of, an error or discrepancy in such Third Party Data, the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, disregard such error or discrepancy and shall not be under any obligation to use the corrected Third Party Data in its calculation of the Strategy Timely Level or the Strategy Tradable Level, as applicable, or to correct or revise the Strategy Timely Level or the Strategy Tradable Level of the GS Strategy following the release of the corrected Third Party Data by the Third Party Data Source; or

(ii) (a) the Third Party Data Source ceases to publish such Third Party Data (or the Third Party Data Source announces that it will cease to publish such Third Party Data), and such Third Party Data is not replaced by any equivalent information or data, or (b) there is a material change in the formula for or method of calculating, or the content or frequency of publication of, such Third Party Data, or (c) the Third Party Data Source fails to calculate or publish such Third Party Data for an extended period of time, in the reasonable judgement of the Strategy Sponsor, then the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, (I) elect to replace or remove (or assign a zero weight to) the Component(s) affected by the unavailability or material change(s) to such information or data from the GS Strategy at the earliest possible opportunity as it determines to be commercially reasonable in order for the Strategy Timely Level or the Strategy Tradable Level of the GS Strategy to continue to be calculated notwithstanding the relevant circumstances, or (II) use third party information or data from an alternative data source which it determines to be comparable to such Third Party Data and to be appropriate in order to preserve the original economic objective of the GS Strategy (and such third party information or data will be deemed to be Third Party Data for the purposes of the GS Strategy), or (III) make such adjustment(s) to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary, in its discretion and acting in a commercially reasonable manner, to reflect such unavailability or change(s), or (IV) if the Strategy Sponsor determines that none of the above adjustment(s) would achieve a commercially reasonable result and/or that it is no longer possible or practicable to calculate the GS Strategy, terminate the calculation and publication of the GS Strategy without notice.

4. Delay in publication of third party information or data

Subject to paragraph 3 of this Section E: *Consequences of Adjustment Events*, if a Third Party Data Source fails to publish or make available on the scheduled publication date for any reason any Third Party Data used to calculate the Strategy Timely Level or the Strategy Tradable Level of the GS Strategy in respect of a Strategy Calculation Day, the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, use the Third Party Data last published or made available by such Third Party Data Source to calculate the Strategy Timely Level or the Strategy Tradable Level of the GS Strategy in respect of such Strategy Calculation Day.

Section F: General Definitions

Terms not otherwise defined in this General Basket Strategy Base Description in respect of a GS Strategy shall have the meanings given to them below.

"**Adjustment Events**" means each of the events described in Section E: *Consequences of Adjustment Events* in this General Basket Strategy Base Description.

"**Asset Class Specific Definitions**" means the definitions in Section G: *Relevant Asset Class Specific Definitions* of this General Basket Strategy Base Description, provided that each paragraph of Section G: *Relevant Asset Class Specific Definitions* of this General Basket Strategy Base Description shall only apply to an Instrument as defined in such paragraph or a Component that is calculated by reference to such an Instrument and in respect of which the Style specified is contained in the Timely and Tradable Level Table included in such paragraph.

"**Associated Immediate Component**" means, in respect of an Immediate Component Template and any Strategy Calculation Day, each component defined by such Immediate Component Template on such Strategy Calculation Day. Each Associated Immediate Component will also be a Terminal Component.

"**Associated Immediate Component Set**" shall have the meaning given to such term in Section D: *Associated Immediate Components* of this General Basket Strategy Base Description.

"**Associated Immediate Component Start Date**" shall have the meaning given to such term in Section D: *Associated Immediate Components* of this General Basket Strategy Base Description.

"**Component**" means a Terminal Component or a Non-Terminal Component.

"**Component Execution Day**" means, in respect of a Component or an Immediate Component Template, each day determined in accordance with the Style of such Component or Immediate Component Template and as described in the Timely and Tradable Level Table in respect of such Component or Immediate Component Template, provided that if no Component Execution Days are specified in respect of such Style, the Component Execution Days in respect of such Component or Immediate Component Template shall be each Trading Day in respect of such Component or Immediate Component Template.

"**Component Ticker**" means, in respect of a Component, the Bloomberg ticker reference (or any official successor thereto) corresponding to such Component as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements (or if not so specified and if such Component is a Terminal Component included in an Immediate Component, as determined in accordance with the rules of such Immediate Component).

"**Currency Business Day**" means, in respect of a Currency Conversion Component or a Currency Cross, each day specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of such Currency Conversion Component or Currency Cross, or if not so specified, either (a) if the relevant Currency Cross is a Non-USD Currency Cross, each day that is a Currency Business Day for the Denominated Dollar Cross in respect of such Currency Cross and a Currency Business Day for the Underlying Dollar Cross, or (b) otherwise, each day on which the Spot Exchange Rate in respect of the relevant Currency Cross is scheduled to be published on the relevant Spot Exchange Rate Price Source.

"**Currency Conversion Component**" means, in respect of:

(i)   a Component, the Currency Cross with a Denominated Currency equal to the Strategy Calculation Currency and an Underlying Currency equal to the Quoted Currency of such Component; or

(ii)   an Immediate Component Template, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

For the purposes of determining the Timely Level or the Tradable Level of a Currency Conversion Component, the Style of such Currency Conversion Component shall be deemed to be "FX-Spot". For the avoidance of doubt, if (a) in respect of a Component, the Quoted Currency is the same as the Strategy Calculation Currency or (b) in respect of an Immediate Component Template, Currency Conversion Component is specified as "Not Applicable", or is not so specified, in each case there will be no Currency Conversion Component in respect of such Component or Immediate Component Template, and for the purposes of any calculations, the Timely Level and the Tradable Level of the Currency Conversion Component in respect of such Component or Immediate Component Template shall be deemed to be one (1).

"**Currency Cross**" means, in respect of two currencies, the Denominated Currency and the Underlying Currency, a rate expressed as the number of units of the Denominated Currency per unit of the Underlying Currency.

"**Denominated Currency**" means, in respect of a Currency Cross, the currency specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Denominated Dollar Cross**" means, in respect of a Non-USD Currency Cross and the Denominated Currency in respect of such Non-USD Currency Cross (the "**Original Denominated Currency**" for the purposes of this definition of Denominated Dollar Cross), the Currency Cross in respect of which the Denominated Currency is USD and the Underlying Currency is the Original Denominated Currency.

"**Disjoint Execution**" will be specified as either "Applicable" or "Not Applicable" in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, shall be deemed to be specified as "Not Applicable".

"**Exchange Rate Disruption Event**" means, in respect of a Currency Cross and a Strategy Calculation Day, any one of the following events, as determined by the Strategy Sponsor:

(i)   the relevant Spot Exchange Rate has ceased to be published by the relevant Price Source, and has not been replaced by a successor Price Source; or

(ii)   Dual Currency Event: the Underlying Currency or the Denominated Currency in respect of such Currency Cross splits into dual or multiple currencies; or

(iii)   Inconvertibility Event: an event has occurred in, or affecting, any jurisdiction whose currency is either the Underlying Currency or the Denominated Currency in respect of such Currency Cross, as the case may be, that generally makes it impossible to convert the Underlying Currency into the Denominated Currency or, as the case may be, the Denominated Currency into the Underlying Currency, through customary legal channels; or

(iv)   Exchange Rate Unavailability: it is or becomes impossible or not reasonably practicable for the Strategy Sponsor to obtain a currency exchange rate for such Currency Cross (including the Spot Exchange Rate) from the relevant Price Source or any other source for purposes of the GS Strategy, or to obtain a firm quote for a currency exchange rate for such Currency Cross (including the Spot Exchange Rate); or

(v)   Non-Transferability Event: (a) an event has occurred in, or affecting, any jurisdiction whose currency is the Underlying Currency that generally makes it impossible to deliver (I) the Denominated Currency from accounts inside such jurisdiction to accounts outside such jurisdiction or (II) the Underlying Currency between accounts inside such jurisdiction or to a party that is a non-resident of such jurisdiction, or (b) an event has occurred in, or affecting, any jurisdiction whose currency is the Denominated Currency that generally makes it impossible to deliver (I) the Underlying Currency from accounts inside such jurisdiction to accounts outside such jurisdiction or (II) the Denominated Currency between accounts inside such jurisdiction or to a party that is a non-resident of such jurisdiction; or

(vi)   Governmental Authority Default: a default, event of default, or other similar condition or event (however described) with respect to any security or indebtedness for borrowed money of, or guaranteed by, any Governmental Authority, including, but not limited to, (a) the failure of timely payment in full of any principal, interest, or other amounts due (without giving effect to any applicable grace periods) in respect of any such security, indebtedness, or guarantee, (b) a declared moratorium, standstill, waiver, deferral, repudiation, challenge of the validity, or rescheduling of any principal, interest, or other amounts due in respect of any such security, indebtedness, or guarantee, or (c) the amendment or modification of the terms and conditions of payment of any principal, interest, or other amounts due in respect of any such security, indebtedness, or guarantee without the consent of all holders of such obligation. For these purposes, the determination of the existence or occurrence of any default, event of default, or other similar condition or event shall be made without regard to any lack or alleged lack of authority or capacity of such Governmental Authority to issue or enter into such security, indebtedness, or guarantee; or

(vii)   Nationalisation Event: any expropriation, confiscation, requisition, nationalisation or other action by a relevant Governmental Authority which deprives any market participant of all or substantially all of its assets in any jurisdiction whose currency is the Underlying Currency or the Denominated Currency; or

(viii) Inability to Transact: the occurrence or existence at any time, of any event or circumstance that disrupts or impairs (a) the ability of market participants in general to effect transactions in relation to the Underlying Currency or the Denominated Currency in a notional size required in relation to any product or transaction linked to a GS Strategy, (b) impairs the liquidity of transactions in relation to the Underlying Currency or the Denominated Currency, (c) the ability to obtain market values of, the Underlying Currency or the

Denominated Currency, or (d) the ability of any market participant, after using commercially reasonable efforts, to acquire, establish, re-establish, substitute, maintain, unwind, or dispose of any hedge position relating to the GS Strategy or any transaction linked to the GS Strategy or to realise, recover or remit the proceeds of any such transaction; or

(ix)   Currency Merger: the Underlying Currency or the Denominated Currency ceases to exist and is replaced by another currency.

"**Execution Day**" means, in respect of an Immediate Component or an Immediate Component Template, as determined by the Strategy Calculation Agent in accordance with paragraph (i) or (ii) below:

(i)   if Disjoint Execution is specified as "Applicable" in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, each day that (a) is a Strategy Calculation Day, (b) is a Currency Business Day in respect of the Currency Conversion Component of such Immediate Component or Immediate Component Template (if applicable) and (c) is a Component Execution Day in respect of such Immediate Component or Immediate Component Template (as applicable); or

(ii)   if Disjoint Execution is specified as "Not Applicable" in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements or is deemed to be "Not Applicable" in accordance with the definition of Disjoint Execution, each day that (a) is a Strategy Calculation Day, (b) is a Currency Business Day in respect of the Currency Conversion Component of all Components or Immediate Component Templates included in the GS Strategy (if applicable) and (c) is a Component Execution Day in respect of all Components and Immediate Component Templates included in the GS Strategy (if applicable).

"**Execution Lag**" means, in respect of an Immediate Component, the non-negative integer specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, zero (0).

"**Execution Start Date**" means, in respect of a Rebalancing Date and an Immediate Component or an Immediate Component Template;

(i)   if the Execution Lag in respect of such Immediate Component or Immediate Component Template (as applicable) is specified as zero (0), the first Execution Day in respect of such Immediate Component or Immediate Component Template (as applicable) falling on or after such Rebalancing Date;

(ii)   otherwise, the first Execution Day in respect of such Immediate Component or Immediate Component Template (as applicable) falling on or immediately after the number of Trading Days in respect of such Immediate Component or Immediate Component Template equal to the Execution Lag from, but excluding, such Rebalancing Date.

"**Fade-In Days**" means, in respect of a Rebalancing Date and an Immediate Component, the sequence of consecutive Execution Days in respect of such Immediate Component equal in number to the Number of Fading Days, beginning on, and including, the Execution Start Date in respect of such Rebalancing Date and such Immediate Component.

"**Fade-Out Days**" means, in respect of a Rebalancing Date (for the purposes of this definition of Fade-Out Days, the "**Relevant Rebalancing Date**") and an Immediate Component, the Fade-In Days in respect of such Immediate Component and the Rebalancing Date falling the number of Rebalancing Dates equal to the Holding Period Rebalancing Days following the Relevant Rebalancing Date.

"**First Tradable Date**" means, in respect of a Strategy Calculation Day t and:

(i)   an Instrument or a Currency Conversion Component, the first Strategy Calculation Day (measured from, and including, Strategy Calculation Day t) on which no Non-Tradable Event exists in respect of such Instrument or Currency Conversion Component (as applicable), provided that if one or more Non-Tradable Event(s) in respect of such Instrument or Currency Conversion Component (as applicable) exists on Strategy Calculation Day t and each of the five (5) Strategy Calculation Days, immediately following Strategy Calculation Day t, then the sixth (6th) Strategy Calculation Day immediately following Strategy Calculation Day t shall be deemed to be the First Tradable Date, notwithstanding the fact that a Non-Tradable Event may be existing on such sixth (6th) Strategy Calculation Day, provided that if the Strategy Sponsor expects that no Non-Tradable Event will exist in respect of such Instrument or Currency Conversion Component (as applicable) shortly after such sixth (6th) Strategy Calculation Day (determined by the Strategy Sponsor in its discretion and acting in a commercially reasonable manner), the Strategy Sponsor may postpone the First Tradable Date to the first Strategy Calculation Day on which no Non-Tradable Event Exists in respect of such Instrument or Currency Conversion Component (as applicable),

provided further that the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, determine that such event also results in an Adjustment Event; and

(ii)   a Component, the First Tradable Date to fall latest in time in respect of such Strategy Calculation Day *t* and all Instruments and Currency Conversion Components used to calculate the level of such Component.

"**Force Majeure Event**" means, in respect of a GS Strategy, an event or circumstance (including, without limitation, a systems failure, fire, building evacuation, natural or man-made disaster, act of God, armed conflict, act of terrorism, riot or labour disruption or any similar intervening circumstance) that is beyond the reasonable control of the Strategy Sponsor and that, in the Strategy Sponsor's sole and absolute discretion, is likely to have a material adverse effect on any Instrument or Component.

"**General Basket Strategy Base Description**" shall have the meaning given to such term in Section A: *General* of this document.

"**General Index Provisions**" shall have the meaning given to such term in Section A: *General* of this General Basket Strategy Base Description.

"**Governmental Authority**" means, in respect of a Currency Cross, in relation to the primary jurisdiction whose currency is the relevant Underlying Currency or the relevant Denominated Currency, any de facto or de jure government (or any agency or instrumentality thereof), court, tribunal, administrative, executive, legislative or other governmental authority, or any other entity (private or public) charged with the regulation of the financial markets (including the central bank) of such jurisdiction (which with respect to the Euro shall include the European Union as well as any member state thereof from time to time whose currency is the Euro).

"**GS Strategy**" shall have the meaning given to such term in Section A: *General* of this General Basket Strategy Base Description.

"**Holding Period Rebalancing Days**" shall have the meaning given to such term in paragraph 1 of Section C: *Calculation of the number of Units of a Terminal Component* of this General Basket Strategy Base Description.

"**Immediate Component**" means, in respect of any Strategy Calculation Day;

(i)   an immediate component included in a GS Strategy as determined from time to time in accordance with the provisions of the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, provided that (a) if an Immediate Component Start Date is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of such immediate component, such Strategy Calculation Day falls on or after such Immediate Component Start Date and (b) if an Immediate Component End Date is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of such immediate component, such Strategy Calculation Day falls on or before the First Tradable Date in respect of such immediate component and the final Fade-Out Day in respect of the Rebalancing Date falling on or immediately prior to such Immediate Component End Date; and

(ii)   an Associated Immediate Component, provided that such Strategy Calculation Day falls in the period commencing on, and including, the Associated Immediate Component Start Date in respect of such Associated Immediate Component and ending on, and including the Last Fade-Out Day in respect of the Rebalancing Date by reference to which such Associated Immediate Component Start Date is determined.

"**Immediate Component End Date**" means, if specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of an Immediate Component, the date after which there will be no new positions entered in respect of such Immediate Component.

"**Immediate Component Start Date**" means, if specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of an Immediate Component, the date from which such Immediate Component will be deemed to be included in a GS Strategy.

"**Immediate Component Template**" means, in respect of an Associated Immediate Component Set, the template that includes the specifications required to define each Associated Immediate Component belonging to such Associated Immediate Component Set (including, but not limited to, the Style of such Associated Immediate Components), as more particularly described in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Immediate Component Weight**" means, in respect of an Immediate Component and a Rebalancing Date, the weight assigned to such Immediate Component in respect of such Rebalancing Date, as determined in

accordance with the provisions set out in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Immediate Units**" means, in respect of an Immediate Component and a Strategy Calculation Day, the size of the position in such Immediate Component on such Strategy Calculation Day held by the GS Strategy, as determined in accordance with the provisions set out in Section C: *Calculation of the number of Units of a Terminal Component* of this General Basket Strategy Base Description.

"**Initial Strategy Level**" means the Strategy Tradable Level on the Strategy Inception Date, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Instrument**" means each tradable instrument defined as such in the Asset Class Specific Definitions.

"**Instrument Trading Day**" means, in respect of an Instrument, each day defined as such in the Asset Class Specific Definitions corresponding to such Instrument.

"**Instrument Valuation Data**" means, in respect of an Instrument, any level, price, rate or data specified as such in the Asset Class Specific Definitions corresponding to such Instrument.

"**Last Fade-Out Day**" means, in respect of a Rebalancing Date (for the purposes of this definition of Last Fade-Out Day, the "**Relevant Rebalancing Date**") and an Immediate Component Template, the final Execution Day in the sequence of consecutive Execution Days in respect of such Immediate Component Template equal in number to the Number of Fading Days beginning on, and including, the Execution Start Date in respect of such Immediate Component Template and the Rebalancing Date falling the number of Rebalancing Dates equal to the Holding Period Rebalancing Days following the Relevant Rebalancing Date.

"**Market Disruption Event**" means, in respect of a Strategy Calculation Day and:

(i)   in respect of a Component, any one of the following events, as determined by the Strategy Sponsor:

(a)   each event specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements (or if not so specified and if such Component is a Terminal Component included in an Immediate Component, as determined in accordance with the rules of such Immediate Component);

(b)   if such Component is a Non-Terminal Component, the occurrence on such Strategy Calculation Day of a Market Disruption Event in respect of any Terminal Component included in such Component;

(c)   the occurrence of a Market Disruption Event (or other analogous event) in respect of any Instrument, Currency Cross, or other asset, instrument or rate (including, but not limited to, an option, exchange rate or interest rate) included in such Component or used in the calculation of the level of, such Component; or

(d)   if such Component is an Instrument, each event specified as a Market Disruption Event in the Asset Class Specific Definitions corresponding to such Instrument;

(ii)   in respect of an Instrument that is not a Component, each event specified as such in the Asset Class Specific Definitions corresponding to such Instrument;

(iii)   in respect of a Currency Cross, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(a)   an Exchange Rate Disruption Event in respect of such Currency Cross; or

(b)   the occurrence or existence, on such Strategy Calculation Day at any time, of a suspension of, or limitation imposed on, trading on the London interbank market or the interbank market of the city or cities determined by the Strategy Sponsor to be the principal financial centre(s) for the Underlying Currency or the Denominated Currency;

(iv)   in respect of an Overnight Interest Rate, if it has become impossible or otherwise impracticable to obtain such Overnight Interest Rate or any rate used to calculate such Overnight Interest Rate; or

(v)   any asset, instrument or rate other than an Instrument (including, but not limited to, an option, exchange rate or interest rate) included in a Component or used in the calculation of the level of a Component, the

occurrence of a Market Disruption Event (or other analogous event) on such Strategy Calculation Day, as determined in accordance with the rules of such Component unless otherwise specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**MDE Linked Component**" means, in respect of a Terminal Component included in such GS Strategy (for the purposes of this definition, the "**Relevant Terminal Component**"):

(i)   each Terminal Component specified to be a MDE Linked Component relating to the Relevant Terminal Component in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements; or

(ii)   if the Relevant Terminal Component is a Terminal Component included in an Immediate Component, each MDE Linked Component in respect of the Relevant Terminal Component as determined in accordance with the rules of such Immediate Component; or

(iii)   each MDE Linked Component in respect of a Terminal Component which is in turn an MDE linked Component in respect of the Relevant Terminal Component.

"**Non-Terminal Component**" means each component specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Non-Tradable Event**" means, in respect of a Strategy Calculation Day and:

(i)   a Component, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(a)   such Strategy Calculation Day is not a Trading Day for such Component; or

(b)   a Market Disruption Event is occurring or existing in respect of such Component on such Strategy Calculation Day; or

(c)   if such Component is a Terminal Component, a Market Disruption Event is occurring or existing in respect of one or more MDE Linked Components in respect of such Component on such Strategy Calculation Day; or

(d)   if such Component is an Instrument, each event specified as such in the Asset Class Specific Definitions corresponding to such Instrument;

(ii)   an Instrument that is not a Component, each event specified as such in the Asset Class Specific Definitions corresponding to such Instrument;

(iii)   a Currency Conversion Component, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(a)   such Strategy Calculation Day is not a Currency Business Day in respect of such Currency Conversion Component; or

(b)   a Market Disruption Event is occurring or existing in respect of the relevant Currency Cross on such Strategy Calculation Day;

(iv)   a GS Strategy, the occurrence of a Non-Tradable Event in respect of (a) any Terminal Component included in such GS Strategy or (b) any Currency Conversion Component in respect of any such Terminal Component (if applicable).

"**Non-USD Currency Cross**" means a Currency Cross in respect of which neither the Denominated Currency nor the Underlying Currency are USD.

"**Number of Fading Days**" shall have the meaning given to such term in paragraph 1 of Section C: *Calculation of the number of Units of a Terminal Component* of this General Basket Strategy Base Description.

"**Other Relevant Strategy Documentation Elements**" shall have the meaning given to such term in Section A: General of this General Basket Strategy Base Description.

"**Overnight Interest Rate**" means, in respect of a day, the value published on the Overnight Interest Rate Data Source in respect of such day. If such day is not an Overnight Interest Rate Business Day, the value published for the immediately preceding day that is an Overnight Interest Rate Business Day.

"**Overnight Interest Rate Business Day**" means, each day specified as such in the Total Return Specifications table in the Relevant Specifications Annex.

"**Overnight Interest Rate Data Source**" means the data source(s) specified to be the "Overnight Interest Rate Data Source" in the Total Return Specifications table in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Overnight Interest Rate Day Count Fraction**" means, in respect of any period of time, the day count fraction specified as such in the Total Return Specifications table in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Price Source**" means, (i) in respect of an Instrument or the Instrument Valuation Data in respect of such Instrument, as defined in the Asset Class Specific Definitions in respect of such Instrument, (ii) in respect of a Currency Conversion Component, the Spot Exchange Rate Price Source in respect of the relevant Currency Cross and (iii) in respect of the Overnight Interest Rate, the Overnight Interest Rate Data Source.

"**Quoted Currency**" means, in respect of a Component, the currency in which the Timely Level and Tradable Level of such Component is expressed, as determined in accordance with the Style of such Component and as described in the Timely and Tradable Level Table in respect of such Component.

"**Rebalancing Date**" means, in respect of a Reference Date, each day specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Reference Date**" means each day specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Relevant General Strategy Description**" shall have the meaning given to such term in Section A: *General* of this General Basket Strategy Base Description.

"**Servicing Cost Rate**" means, in respect of a Terminal Component, a rate per annum as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements (or if not so specified and if such Terminal Component is included in an Immediate Component, as determined in accordance with the rules of such Immediate Component).

"**Servicing Cost Weight Multiplier**" means, in respect of a Terminal Component and a Strategy Calculation Day, the value specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Sponsor**" means, in respect of a Component, the corporation or entity that, in the determination of the Strategy Sponsor, is responsible for setting and reviewing the rules and procedures and the methods of calculation and adjustments, if any, related to such Component and announces or publishes (directly or through an agent) the level of such Component on each day on which the level of such Component is scheduled to be published, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements (or if not so specified and if such Component is a Terminal Component included in an Immediate Component, as determined in accordance with the rules of such Immediate Component).

"**Spot Exchange Rate**" means, in respect of a Currency Cross and any day, the spot exchange rate of the Underlying Currency for the Denominated Currency, expressed as the number of units of the Denominated Currency per unit of the Underlying Currency on such day, as published by the relevant Spot Exchange Rate Price Source, and, if such rate is published by the relevant Spot Exchange Rate Price Source as the number of units of the Underlying Currency per unit of the Denominated Currency, such published level may be inverted in order to be expressed as the number of units of the Denominated Currency per unit of the Underlying Currency. If such day is not a Currency Business Day for the relevant Currency Cross, or such spot exchange rate is otherwise unavailable for any other reason, the Spot Exchange Rate shall be deemed to be the relevant spot exchange rate as of the first preceding Currency Business Day on which the relevant Spot Exchange Rate Price Source published such spot exchange rate. If such Currency Cross is a Non-USD Currency Cross, the Spot Exchange Rate will be calculated by the Strategy Calculation Agent as being equal to the *quotient* of (i) the Spot Exchange Rate in respect of the relevant Underlying Dollar Cross *divided* by (ii) the Spot Exchange Rate in respect of the relevant Denominated Dollar Cross. For the avoidance of doubt, if the relevant Underlying Currency is the same currency as the relevant Denominated Currency, the Spot Exchange Rate shall be deemed to be one (1).

"**Spot Exchange Rate Price Source**" means, in respect of a Currency Cross, the data source specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Strategy Adjustment Event**" means, in respect of a Strategy Calculation Day, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(i)   Force Majeure Event;

(ii)   a material change in national or international financial, political, legal or economic conditions that would likely prejudice the calculation and publication of the Strategy Tradable Level; or

(iii)   the European Union membership of any member of the European Union is discontinued, suspended or terminated, or any member of the European Union disaffirms, disclaims, repudiates or rejects in whole or in part any obligation arising from its European Union membership under the relevant treaties; or

     (a)   the Euro ceases to be the lawful currency of any member of the European Union; or

     (b)   any member of the European Union takes, or indicates its intention to take, any action in furtherance of, or indicates its consent to, approval of, or acquiescence in, any of the foregoing events.

"**Strategy Calculation Agent**" means the entity appointed by the Strategy Sponsor to calculate the GS Strategy, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements. If not specified, the Strategy Calculation Agent is Goldman Sachs International or its successor(s).

"**Strategy Calculation Currency**" means the calculation currency of the Strategy, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, United States dollars ("**USD**").

"**Strategy Calculation Day**" means each day specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, shall mean any day on which the offices of Goldman, Sachs & Co. in New York are open for business.

"**Strategy Floored at Zero**" will be specified as either "Applicable" or "Not Applicable", as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, shall be deemed to be specified as "Applicable".

"**Strategy Inception Date**" means the first date in respect of which the Strategy Tradable Level and Strategy Timely Level is calculated, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Strategy Publication Data Source**" means the publication data source (which may be a Bloomberg ticker or otherwise) on which the Strategy Tradable Level and/or the Strategy Timely Level of a GS Strategy shall be published, if so specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Strategy Rules**" shall have the meaning given to such term in Section A: *General* of this General Basket Strategy Base Description.

"**Strategy Servicing Cost Rate**" means a rate per annum as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, zero (0).

"**Strategy Sponsor**" shall have the meaning given to such term in Section A: *General* of this General Basket Strategy Base Description.

"**Strategy Timely Level**" shall have the meaning given to such term in Section B: *Calculation of the Strategy Tradable Level and Strategy Timely Level* of this General Basket Strategy Base Description.

"**Strategy Tradable Level**" shall have the meaning given to such term in Section B: *Calculation of the Strategy Tradable Level and Strategy Timely Level* of this General Basket Strategy Base Description.

"**Strategy Value Publication Precision**" means the number specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Style**" means, in respect of a Component, a Currency Conversion Component or an Immediate Component Template, the method in accordance with which the Timely Level, the Tradable Level, the Quoted Currency and the Component Execution Days (if applicable) of such Component, Currency Conversion Component or the relevant Associated Immediate Components are determined, as described in the Timely and Tradable Level Table in respect of such Component, Currency Conversion Component or Immediate Component Template and as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements (or if not so specified and if such Component is a Terminal Component included in an Immediate Component, as determined in accordance with the rules of such Immediate Component). The Style of each Associated Immediate Component shall be the Style specified in respect of the Immediate Component Template which defined such Associated Immediate Component.

"**TARGET Business Day**" means each day on which the Trans-European Automated Real-time Gross Settlement Express Transfer (TARGET2) system or any successor is open for the settlement of payments in Euro.

"**Terminal Component**" means either:

(i)   an Immediate Component which is specified to be a Terminal Component in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements; or

(i)   a Component specified as a Terminal Component in respect of an Immediate Component which is a Non-Terminal Component, as determined in accordance with the rules of such Immediate Component.

"**Third Party Data**" shall have the meaning given to such term in paragraph 3 of Section E: *Consequences of Adjustment Events* of this General Basket Strategy Base Description.

"**Third Party Data Source**" shall have the meaning given to such term in paragraph 3 of Section E: *Consequences of Adjustment Events* of this General Basket Strategy Base Description.

"**Timely and Tradable Level Table**" means (i) in respect of a Component or an Immediate Component Template, the Timely and Tradable Level Table set out below or in the relevant Asset Class Specific Definitions (as applicable) or (ii) in respect of a Currency Conversion Component, the Timely and Tradable Level Table set out below, in each case describing the Style specified in respect of such Currency Conversion Component, Component or Immediate Component Template:

Style	Timely/Tradable/ Quoted Currency/Component Execution Days	Provisions
FX-Spot	Timely	The Timely Level of a Currency Conversion Component on any day shall be the Spot Exchange Rate in respect of the relevant Currency Cross and such day.
FX-Spot	Tradable	The Tradable Level of a Currency Conversion Component on Strategy Calculation Day *t* shall be the Timely Level in respect of such Strategy Calculation Day, unless a Non-Tradable Event is occurring in respect of such Currency Conversion Component or the Component *c* corresponding to such Currency Conversion Component on such Strategy Calculation Day, in which case the Tradable Level of such Currency Conversion Component shall be the Spot Exchange Rate in respect of the relevant Currency Cross on the day (the "**Resolution Day**" for the purposes of this definition of Tradable Level only) that is the First Tradable Date in respect of such Currency Conversion Component and the Strategy Calculation Day that falls on the First Tradable Date in respect of such Component *c* and Strategy Calculation Day *t*, provided that if a Non-Tradable Event in respect of such Currency Conversion Component exists on the Resolution Day, the Tradable Level of such Currency Conversion Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner.
FX-Spot	Quoted Currency	The Quoted Currency of a Currency Conversion Component shall be the Denominated Currency of the relevant Currency Cross.

Style	Timely/Tradable/ Quoted Currency/Compo nent Execution Days	Provisions
B	Timely	The Timely Level of a Component on any day will be calculated in accordance with the definition of "Strategy Timely Level" specified in the relevant rules in respect of such Component.
B	Tradable	The Tradable Level of a Component on a Strategy Calculation Day will be calculated in accordance with the definition of "Strategy Tradable Level" specified in the relevant rules in respect of such Component, provided that if such Tradable Level would be determined on a day which would fall after the First Tradable Date in respect of such Strategy Calculation Day and such Component, the Tradable Level of such Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner.
B	Quoted Currency	The Quoted Currency of a Component shall be the "Strategy Calculation Currency" specified in the relevant rules in respect of such Component, or if not so specified, shall be USD.
B	Component Execution Days	The Component Execution Days of a Component shall be each day that is a "Strategy Trading Day" as specified in the relevant rules in respect of such Component, or if not so specified, each day that is a Trading Day in respect of such Component.
C	Timely	The Timely Level of a Component on any day will be calculated in accordance with the definition of "Strategy Closing Level" specified in the relevant rules in respect of such Component.
C	Tradable	The Tradable Level of a Component on a Strategy Calculation Day will be calculated in accordance with the definition of "Strategy Tradable Level" specified in the relevant rules in respect of such Component, provided that if such Tradable Level would be determined on a day which would fall after the First Tradable Date in respect of such Strategy Calculation Day and such Component, the Tradable Level of such Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner.
C	Quoted Currency	The Quoted Currency of a Component shall be specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, shall be USD.

"**Timely Level**" means, in respect of a Component or a Currency Conversion Component and any day, the "timely" level, price or rate of such Component or Currency Conversion Component (as the case may be) on such day, as determined in accordance with the Style of such Component or Currency Conversion Component and as described in the Timely and Tradable Level Table corresponding to such Component or Currency Conversion Component, provided that if such day is not a day on which the level of such Component or Currency Conversion Component is scheduled to be published, then the Timely Level of such Component or Currency Conversion Component for such day shall be deemed to be the Timely Level of such Component or Currency Conversion Component on the immediately preceding day on which such Component or Currency Conversion Component is scheduled to be published.

"**Tradable Level**" means, in respect of a Component or a Currency Conversion Component, and a Strategy Calculation Day, the "tradable" level or price of such Component or Currency Conversion Component (as the case may be) on such Strategy Calculation Day, as determined in accordance with the Style of such Component or Currency Conversion Component and as described in the Timely and Tradable Level Table in respect of such Component or Currency Conversion Component.

"**Trading Day**" means, in respect of:

(i)   a Non-Terminal Component, a day which is (I) a Trading Day for all the Terminal Components included in such Non-Terminal Component and (II) a day on which such Component is scheduled to be published;

(ii)   a Terminal Component, a day which is (I) an Instrument Trading Day for such Terminal Component and any Instruments included in or referenced by such Component, (II) a day on which any other asset, instrument or rate (including, but not limited to, an option, exchange rate or interest rate) included in such Component or used in the calculation of the level of such Component, is scheduled to be traded or published, as applicable, and (III) a day on which such Component is scheduled to be published or traded (as applicable);

(iii)   an Immediate Component Template, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements; and

(iv)   a GS Strategy, each day which is (a) a Trading Day for all the Terminal Components included in such GS Strategy, (b) a Currency Business Day for all Currency Conversion Components in respect of such Terminal Components and (c) a Strategy Calculation Day for the GS Strategy (if applicable).

"**Transaction Cost Class**" means a class of one or more Terminal Components with a common Transaction Cost Rate. A Terminal Component will be part of each Transaction Cost Class which such Terminal Component is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements as being a part of (or if not so specified and if such Terminal Component is a Terminal Component included in an Immediate Component, as determined in accordance with the relevant rules of such Immediate Component), provided that each Terminal Component that is not specified to be part of any Transaction Cost Class in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, will be deemed to constitute a separate Transaction Cost Class and the Transaction Cost Rate in respect of each such Transaction Cost Class shall be equal to the Transaction Cost Rate in respect of the relevant Terminal Component.

"**Transaction Cost Rate**" means, in respect of a Transaction Cost Class or a Terminal Component, a rate specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of such Transaction Cost Class or such Terminal Component, as applicable (or if not so specified and if such Terminal Component is a Terminal Component included in an Immediate Component, as determined in accordance with the relevant rules of such Immediate Component)*.*

"**Transaction Cost Weight Multiplier**" means, in respect of Strategy Calculation Day, a Terminal Component and a Transaction Cost Class in respect of which such Terminal Component is a part of (or constitutes), as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of such Terminal Component and such Transaction Cost Class, or if not so specified, the Tradable Level of each such Terminal Component in respect of such Strategy Calculation Day.

"**Treasury Bill Rate**" means, in respect of any Strategy Calculation Day, the 91-day discount rate for U.S. Treasury Bills, as reported by the U.S. Department of the Treasury's Treasury Direct service at http://www.treasurydirect.gov/instit/instit.htm?upcoming on the most recent weekly auction date falling on or prior to such Strategy Calculation Day.

"**Underlying Currency**" means, in respect of a Currency Cross, the currency specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Underlying Dollar Cross**" means, in respect of a Non-USD Currency Cross and the Underlying Currency in respect of such Non-USD Currency Cross (the "**Original Underlying Currency**" for the purposes of this definition of Underlying Dollar Cross), the Currency Cross in respect of which the Denominated Currency is USD and the Underlying Currency is the Original Underlying Currency.

"**Units**" means, in respect of a Terminal Component and a Strategy Calculation Day, the size of the position in such Terminal Component on such Strategy Calculation Day held by the GS Strategy, as determined in accordance with the provisions set out in Section C: *Calculation of the number of Units of a Terminal Component* of this General Basket Strategy Base Description.

"**Units Scaling Factor**" means, in respect of an Immediate Component, the number specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

Section G: Asset Class Specific Definitions

1. Futures Definitions

Terms defined in this sub-section 1 of Section G: Asset Class Specific Definitions of this General Basket Strategy Base Description shall only apply to (a) each tradable instrument defined as an Instrument in this sub-section and (b) each Component calculated by reference to such an Instrument and for which the Style specified is contained in the Timely and Tradable Level Table set out in this sub-section or in the Timely and Tradable Level Table set out in Section F: General Definitions of this General Basket Strategy Base Description. This sub-section and shall be read in conjunction with the definitions in Section F: General Definitions of this General Basket Strategy Base Description.

"**Contract Expiration**" means in respect of a Futures Contract, the version of that Futures Contract associated with a relevant date, month or term specified for delivery of, or settlement in respect of, the underlying of such Futures Contract (which must be a date, month or term reported or capable of being determined from information reported in or by the relevant Price Source) on, during or after which delivery or settlement will occur. References to the price of a Contract Expiration shall mean the price of such Futures Contract with respect to such Contract Expiration.

"**Daily Contract Reference Price**" means, in respect of a Contract Expiration and any day, the settlement price of such Contract Expiration on such day, expressed in the currency in which such Contract Expiration is settled, that is generally used by participants in the related cash or over-the-counter market as a benchmark for transactions related to such Contract Expiration and which is announced by the relevant Price Source. If such day is not an Exchange Business Day for such Contract Expiration or if the settlement price is not available on such day for any other reason, the Daily Contract Reference Price shall be deemed to be the settlement price for such Contract Expiration as of the last day on which the relevant Trading Facility was open for trading for its regular trading session, notwithstanding such Trading Facility closing prior to its scheduled closing time.

"**Exchange Business Day**" means, in respect of a Contract Expiration, any day on which the relevant Trading Facility for such Contract Expiration is scheduled to be open for trading for its regular trading session, notwithstanding any such Trading Facility closing prior to its scheduled closing time.

"**Futures Contract**" means any contract that provides for the physical delivery of, or is based on the price of, an underlying. All references to the term "**Futures Contract**" shall be deemed to include all Contract Expirations with respect to the Futures Contract in question.

"**Instrument**" means a Contract Expiration which is a Component or which is used to calculate the level of a Component or the GS Strategy.

"**Instrument Trading Day**" means an Exchange Business Day.

"**Instrument Valuation Data**" means the Daily Contract Reference Price.

"**Market Disruption Event**" means, in respect of an Instrument and a Strategy Calculation Day, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(i)   the Daily Contract Reference Price of such Contract Expiration for such Strategy Calculation Day remains at a "limit price" which means that the price of such Contract Expiration on such day has increased or decreased from the previous day's settlement price for such Contract Expiration by the maximum amount permitted under the applicable rules of the relevant Trading Facility; or

(ii)   there is a failure by the relevant Trading Facility or other Price Source to announce or publish the Daily Contract Reference Price for such Strategy Calculation Day, provided that such Strategy Calculation Day is also an Exchange Business Day in respect of such Contract Expiration; or

(iii)   trading in such Contract Expiration on the relevant Trading Facility is suspended or interrupted subsequent to the opening of trading and trading in such Contract Expiration does not recommence at least ten (10) minutes prior to the regular scheduled close of trading in such Contract Expiration, or in the event trading in such Contract Expiration does recommence at least ten (10) minutes prior to the regular scheduled close of trading, trading does not continue until the regular scheduled close of trading in such Contract Expiration.

"**Non-Tradable Event**" means, in respect of an Instrument and a Strategy Calculation Day, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(i) such Strategy Calculation Day is not an Exchange Business Day for such Contract Expiration; or

(ii) a Market Disruption Event is occurring or existing in respect of such Contract Expiration on such Strategy Calculation Day; or

(iii) an adjustment event as set out in paragraph 2(iii)(c) of Section E: *Consequences of Adjustment Events* of this General Basket Strategy Base Description is occurring or existing in respect of such Contract Expiration on such Strategy Calculation Day.

"**Price Source**" means, in respect of a Contract Expiration and the relevant Daily Contract Reference Price, the relevant publication source (or such other source of reference, including but not limited to, a Trading Facility) publishing, containing or reporting the Daily Contract Reference Price used by the relevant Sponsor.

Timely and Tradable Level Table

Style	Timely/ Tradable/ Quoted Currency/ Component Execution Days	Provisions
A	Timely	The Timely Level of a Component on any day will be determined as the official closing level of such Component as published on the relevant Component Ticker on such day, subject to adjustment in accordance with the provisions of the General Basket Strategy Base Description
A	Tradable	The Tradable Level of a Component on a Strategy Calculation Day will be determined as follows: (i) if no Non-Tradable Event occurs in respect of such Component on such Strategy Calculation Day, the Tradable Level of such Component for such Strategy Calculation Day will be equal to the Timely Level of such Component on such Strategy Calculation Day; or (ii) if no MDE Linked Component is specified in respect of such Component and a Non-Tradable Event occurs in respect of any Contract Expiration (the "**Affected Contract Expiration**") included in such Component on such Strategy Calculation Day, the Tradable Level of such Component for such Strategy Calculation Day will be calculated on the First Tradable Date in accordance with the formula for, and method of, calculating such Component, using the Tradable Contract Price (instead of the Daily Contract Reference Price) for the Affected Contract Expiration in respect of such Strategy Calculation Day, and the Strategy Sponsor may make such adjustment(s) to the formula for, and method of, calculating such Component as it determines in a commercially reasonable manner to be appropriate in order to effect such calculation; or (iii) if one or more MDE Linked Components are specified in respect of such Component and a Non-Tradable Event occurs in respect of such Component on such Strategy Calculation Day, the Tradable Level of such Component for such Strategy Calculation Day will be equal to the Timely Level of such Component on the first Strategy Calculation Day following such Strategy Calculation Day on which no Non-Tradable Event occurs in respect of such Component.
A	Quoted Currency	The Quoted Currency of a Component shall be specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, shall be USD.
Rates	Timely	The Timely Level of a Component on any day will be determined in accordance with the definition of "Index Value" in respect of the last "Index Business Day" on or before such day, as specified in the relevant rules in respect of such Component, provided that if the "Index Sponsor" has

Style	Timely/ Tradable/ Quoted Currency/ Component Execution Days	Provisions
		deferred calculation and publication of the "Index Value" due to a "Market Disruption Event" in accordance with the relevant rules in respect of such Component, the Timely Level of a Component shall be the last "Index Value" of such Component on or before such day in which no "Market Disruption Event" has caused the publication of the "Index Value" to be deferred. Each term referred to in this definition of Timely Level only that is surrounded by quotation marks will be as specified in the relevant rules in respect of such Component.
Rates	Tradable	The Tradable Level of a Component on a Strategy Calculation Day shall be the Timely Level in respect of such Strategy Calculation Day, unless a Non-Tradable Event is occurring in respect of such Component and such Strategy Calculation Day, in which case the Tradable Level of a Component shall be the "Index Value" specified in the relevant rules in respect of such Component in respect of the first day on or after such Strategy Calculation Day on which no Non-Tradable Event is occurring in respect of such Component and which is a Strategy Calculation Day for the GS Strategy (such day, the "**Resolution Day**" for the purposes of this definition of Tradable Level only), provided that if the Resolution Day would fall after the First Tradable Date in respect of such Strategy Calculation Day and such Component, the Tradable Level of such Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner.
Rates	Quoted Currency	The Quoted Currency of a Component shall be the "Index Currency" specified in the relevant rules in respect of such Component.
Rates	Component Execution Days	The Component Execution Days of a Component shall be each day that is an "Index Trading Day" as specified in the relevant rules in respect of such Component, or if not so specified, each day that is a Trading Day in respect of such Component.

"**Tradable Contract Price**" means, in respect of a Contract Expiration and a Strategy Calculation Day, the Daily Contract Reference Price of such Contract Expiration on the First Tradable Date in respect of such Strategy Calculation Day, unless a Non-Tradable Event exists on such First Tradable Date, in which case the Tradable Contract Price in respect of such Contract Expiration for such Strategy Calculation Day shall be determined by the Strategy Sponsor in a commercially reasonable manner.

"**Trading Facility**" means, in respect of a Contract Expiration, the exchange, facility or platform on or through which such Contract Expiration is traded.

2. FX Forwards Definitions

Terms defined in this sub-section 2 of Section G: Asset Class Specific Definitions of this General Basket Strategy Base Description shall only apply to (a) each tradable instrument defined as an Instrument in this sub-section and (b) each Component calculated by reference to such an Instrument and for which the Style specified is contained in the Timely and Tradable Level Table set out in this sub-section or in the Timely and Tradable Level Table set out in Section F: General Definitions of this General Basket Strategy Base Description. This sub-section shall be read in conjunction with the definitions in Section F: General Definitions of this General Basket Strategy Base Description.

"**Currency Settlement Day**" means, in respect of a Currency Cross:

(i)   if such Currency Cross is a Non-USD Currency Cross, each day which is a Currency Settlement Day in respect of the relevant Denominated Dollar Cross and the relevant Underlying Dollar Cross; or

(ii)   otherwise, each day which is a Denominated Currency Business Day and an Underlying Currency Business Day in respect of such Currency Cross.

"**Denominated Currency Business Day**" means, in respect of the relevant Currency Cross and the Denominated Currency, (i) if such Denominated Currency is the Euro, each TARGET Business Day, or (ii) otherwise, each day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in the principal financial centre of such Denominated Currency.

"**Forward Contract Business Day**" means, in respect of the relevant Currency Cross, each day that is a Currency Business Day in respect of such Currency Cross and on which any relevant Forward Exchange Rate is scheduled to be published on the relevant Forward Exchange Rate Price Source.

"**Forward Contract Expiration**" means a hypothetical agreement between two parties to enter into a transaction to sell (a notional short position) or purchase (a notional long position) a specific notional amount of the relevant Underlying Currency in exchange for a notional amount of the relevant Denominated Currency on a pre-determined future date (the "**Forward Contract Expiration Date**"). If a Non-Tradable Event occurs in respect of a Forward Contract Expiration on the corresponding scheduled Forward Contract Expiration Date (the "**Original Forward Contract Expiration Date**" for the purposes of this definition), the Forward Contract Expiration Date shall be deemed to be the First Tradable Date in respect of such Forward Contract Expiration and the Original Forward Contract Expiration Date.

"**Forward Contract Expiration Date**" shall have the meaning given to such term in the definition of "Forward Contract Expiration" in this sub-section 2 of Section G: *Asset Class Specific Definitions* of this General Basket Strategy Base Description.

"**Forward Contract Settlement Date**" means, in respect of a Forward Contract Expiration, the Spot Settlement Date in respect of the relevant Currency Cross and the relevant Forward Contract Expiration Date.

"**Forward Exchange Rate**" means, in respect of a Currency Cross, a Forward Tenor, and any day t:

(i)   if such Forward Tenor is specified as "Spot", the Spot Exchange Rate in respect of such Currency Cross and day t; or

(ii)   otherwise, the forward exchange rate of the relevant Underlying Currency for the relevant Denominated Currency in respect of such Forward Tenor and such day, expressed as the number of units of the Denominated Currency per unit of the Underlying Currency, as published by the relevant Forward Exchange Rate Price Source, and, if necessary, such published level may be added to the relevant Spot Exchange Rate and/or, if such rate is published by the relevant Forward Exchange Rate Price Source as the number of units of the Underlying Currency per unit of the Denominated Currency, shall be inverted in order to be expressed as the number of units of the Denominated Currency per unit of the Underlying Currency. If such day is not a Forward Contract Business Day in respect of such Currency Cross, or such forward exchange rate is otherwise unavailable for any other reason, the Forward Exchange Rate shall be deemed to be the relevant forward exchange rate as of the first preceding Forward Contract Business Day on which the Forward Exchange Rate Price Source published such forward exchange rate. If such Currency Cross is a Non-USD Currency Cross, the Forward Exchange Rate will be calculated by the Strategy Calculation Agent as being equal to the *quotient* of (i) the Forward Exchange Rate in respect of such Forward Tenor, day t, and the relevant Underlying Dollar Cross *divided* by (ii) the Forward Exchange Rate in respect of such Forward Tenor, day t, and the relevant Denominated Dollar Cross. For the avoidance of doubt, if the relevant Underlying Currency is the same currency as the relevant Denominated Currency, the Forward Exchange Rate shall be deemed to be one (1).

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"**Forward Exchange Rate Price Source**" means, in respect of a Currency Cross and a Forward Tenor, the data source specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements in respect of the relevant Forward Exchange Rate.

"**Forward Tenor**" means, in respect of a Currency Cross and any day t, a specified period of time (being a specified number of days, weeks, months or years, as the case may be) commencing from day t in respect of which the relevant Forward Exchange Rate Price Source is scheduled to publish the Forward Exchange Rate of the relevant Underlying Currency for the relevant Denominated Currency (expressed as the number of units of the Denominated Currency per unit of the Underlying Currency) and where the Forward Tenor "Spot" means zero (0) days.

"**Forward Settlement Date**" means, in respect of the relevant Currency Cross, a Forward Tenor and any day t, as determined by the Strategy Calculation Agent in accordance with paragraph (i) or (ii) below (as applicable):

(i)   if such Forward Tenor is specified as "Spot", the Spot Settlement Date in respect of such Currency Cross and such day t; or

(ii)   otherwise:

    (a)   if such Currency Cross is a Non-USD Currency Cross, the Forward Settlement Date shall be the first Currency Settlement Day in respect of such Currency Cross falling on or after the later of (I) the Forward Settlement Date in respect of the relevant Denominated Dollar Cross, such Forward Tenor and day t, and (II) the Forward Settlement Date in respect of the relevant Underlying Dollar Cross, such Forward Tenor and day t; or

    (b)   otherwise, the date falling the period of time equal to the Forward Tenor after the Spot Settlement Date in respect of such Currency Cross and such day t (such date, "t^*" for the purposes of this limb (ii)(b) of this definition of Forward Settlement Date), adjusted in accordance with paragraphs (I), (II), or (III) below:

        (I)   if such Forward Tenor is specified as a number of "Months" and such Spot Settlement Date is the last Currency Settlement Day of the calendar month in which it falls, the Forward Settlement Date shall be the last Currency Settlement Day of the month in which t^* falls;

        (II)   if such Forward Tenor is specified as a number of "Months" and such Spot Settlement Date is not the last Currency Settlement Day of the month in which it falls, the Forward Settlement Date shall be the earlier of (x) first Currency Settlement Day falling on or immediately following t^*, or (y) the last Currency Settlement Day of the month in which t^* falls;

        (III)   if such Forward Tenor is not specified as a number of "Months", the Forward Settlement Date shall be the first Currency Settlement Day falling on or immediately following t^*.

"**Instrument**" means a Forward Contract Expiration which is a Component or which is used to determine the level of a Component or the GS Strategy.

"**Instrument Trading Day**" means a Forward Contract Business Day.

"**Instrument Valuation Data**" means the relevant Spot Exchange Rate or the relevant Forward Exchange Rate, as the case may be.

"**Market Disruption Event**" means, in respect of an Instrument and a Strategy Calculation Day, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(i)   a Market Disruption Event in respect of the relevant Currency Cross;

(ii)   the relevant Forward Exchange Rate has ceased to be published by the relevant Price Source and has not been replaced by a successor Price Source; or

(iii)   it is or becomes impossible or not reasonably practicable for the Strategy Sponsor to obtain a currency exchange rate for the relevant Currency Cross (including any relevant Forward Exchange Rate) from the relevant Price Source or any other source for purposes of the GS Strategy, or to obtain a firm quote for a currency exchange rate for the relevant Currency Cross (including any relevant Forward Exchange Rate) specified for use for purposes of the GS Strategy.

"**Non-Tradable Event**" means, in respect of an Instrument and a Strategy Calculation Day, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(i)   such Strategy Calculation Day is not a Forward Contract Business Day for the Currency Cross in respect of such Forward Contract Expiration; or

(ii)   a Market Disruption Event is occurring or existing in respect of such Forward Contract Expiration on such Strategy Calculation Day; or

(iii)   an adjustment event as set out in paragraph 2(iii)(c) of Section E: *Consequences of Adjustment Events* of this General Basket Strategy Base Description is occurring or existing in respect of such Forward Contract Expiration on such Strategy Calculation Day.

"**Price Source**" means, in respect of a Forward Contract Expiration and the relevant Spot Exchange Rate or the relevant Forward Exchange Rate, the relevant Spot Exchange Rate Price Source or the relevant Forward Exchange Rate Price Source as the case may be.

"**Reference Long Forward Tenor**" means, in respect of a Forward Contract Expiration and any day, the first Forward Tenor in the Set of Available Forward Tenors in respect of such Forward Contract Expiration for which the Forward Settlement Date in respect of such day and such Forward Tenor falls on or after the Forward Contract Settlement Date in respect of such Forward Contract Expiration.

"**Reference Short Forward Tenor**" means, in respect of a Forward Contract Expiration and any day, the last Forward Tenor in the Set of Available Forward Tenors in respect of such Forward Contract Expiration for which the Forward Settlement Date in respect of such day and such Forward Tenor falls on or before the Forward Contract Settlement Date in respect of such Forward Contract Expiration, or if there is no such Forward Tenor, then the Reference Short Forward Tenor shall be deemed to be "Spot".

"**Set of Available Forward Tenors**" means, in respect of a Forward Contract Expiration, the list of Forward Tenors specified as such in respect of the Immediate Component Template that defines such Forward Contract Expiration in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements and such set of Forward Tenors shall be deemed to be ordered by the length of the period in respect of each such Forward Tenor such that the shortest period shall be the first Forward Tenor and the longest period shall be the last Forward Tenor. If "Spot" is not specified in the Set of Available Forward Tenors, the Set of Available Forward Tenors shall be deemed to include "Spot" (and "Spot" shall be deemed to be the first Forward Tenor in the Set of Available Forward Tenors).

"**Settlement Delay**" means, in respect of the relevant Currency Cross, the non-negative integer specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Settlement Convention**" means, in respect of the relevant Currency Cross, will be specified as either "b" or "s", as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Spot Settlement Date**" means, in respect of the relevant Currency Cross and any day t, the date determined by the Strategy Calculation Agent in accordance with paragraph (i) or (ii) below, as applicable:

(i)   if such Currency Cross is a Non-USD Currency Cross, the Spot Settlement Date shall be first Currency Settlement Day in respect of such Currency Cross falling on or after the later of (a) the Spot Settlement Date in respect of the relevant Denominated Dollar Cross and day t and (b) the Spot Settlement Date in respect of the relevant Underlying Dollar Cross and day t; or

(ii)   otherwise:

(a)   if the Settlement Convention in respect of such Currency Cross is specified as "b", the Spot Settlement Date shall be the first Currency Settlement Day ("t^*" for the purposes of this limb (ii)(a) of this definition of Spot Settlement Date) such that the number of relevant Currency Settlement Days from, and including, day t, to, but excluding, t^* is equal to the Settlement Delay in respect of such Currency Cross; or

(b)   if the Settlement Convention in respect of such Currency Cross is specified as "s" and:

(I)   the Denominated Currency in respect of such Currency Cross is USD, the Spot Settlement Date shall be the first Currency Settlement Day ("t^*" for the purposes of this limb (ii)(b)(I) of this definition of Spot Settlement Date) such that the number of Underlying Currency

Business Days falling in the period commencing on, but excluding, day *t*, and ending on, and including, *t** is at least equal to the Settlement Delay in respect of such Currency Cross; or

(II)   the Underlying Currency in respect of such Currency Cross (the "**Original Currency Cross**" for the purposes of this limb (ii)(b)(II) of this definition of Spot Settlement Date) is USD, the Spot Settlement Date in respect of the Currency Cross in respect of which the Denominated Currency is USD and the Underlying Currency is the Denominated Currency of the Original Currency Cross.

"**Timely and Tradable Level Table**" means the following table:

Style	Timely/ Tradable/ Quoted Currency/ Component Execution Days	Provisions
FX-Forward	Timely	The Timely Level in respect of Forward Contract Expiration *FC* and any day *t* shall be determined in accordance with paragraph (i) or (ii) below (as applicable): (i) if the relevant Currency Cross is a Non-USD Currency Cross, the Timely Level shall be the *quotient* of (a) the Timely Level in respect day *t* and a Forward Contract Expiration with the same specifications (for the avoidance of doubt, including the same Forward Contract Settlement Date) as Forward Contract Expiration *FC* (except that the Currency Cross is the relevant Underlying Dollar Cross) *divided* by (b) the Timely Level in respect of day *t* and a Forward Contract Expiration with the same specifications (for the avoidance of doubt, including the same Forward Contract Settlement Date) as Forward Contract Expiration *FC* (except that the Currency Cross is the relevant Denominated Dollar Cross); (ii) otherwise, the Timely Level will be equal to the "Interpolated Forward Exchange Rate", as determined in accordance with the formula below: $$FX_t(FC) = FwdS_t(CC) + \left((FwdL_t(CC) - FwdS_t(CC)) \times \frac{Tenor_t(S, FC)}{Tenor_t(S, L)} \right)$$ Provided that (a) if day *t* is not a Forward Contract Business Day in respect of the relevant Currency Cross the Timely Level shall be the Timely Level in respect of Forward Contract Expiration *FC* and the Forward Contract Business Day immediately preceding day *t* and (b) if the Reference Short Forward Tenor in respect of Forward Contract Expiration *FC* and day *t* is the same Forward Tenor as the Reference Long Forward Tenor in respect of Forward Contract Expiration *FC* and day *t*, $FX_t(FC)$ shall be deemed to be equal to $FwdS_t(CC)$. Where: "**$FX_t(FC)$**" means the Interpolated Forward Exchange Rate in respect of such Forward Contract Expiration *FC* and day *t*; "**$FwdL_t(CC)$**" means the Forward Exchange Rate in respect of the relevant Currency Cross, day *t* and the Reference Long Forward Tenor in respect of such Forward Contract Expiration *FC* and day *t*; "**$FwdS_t(CC)$**" means the Forward Exchange Rate in respect of the relevant Currency Cross, day *t* and the Reference Short Forward Tenor in respect of such Forward Contract Expiration *FC* and day *t*; "**$Tenor_t(S,FC)$**" means, in respect of any day *t*, Forward Contract Expiration *FC* and the Reference Short Forward Tenor in respect of such day *t* and such Forward Contract Expiration *FC*, as determined in accordance with paragraph (i)

Style	Timely/ Tradable/ Quoted Currency/ Component Execution Days	Provisions
		or (ii) below: (i) if the Forward Settlement Date in respect of the relevant Currency Cross, day t and such Reference Short Forward Tenor (for the purposes of this definition the "**Relevant Forward Settlement Date**") is the Forward Contract Settlement Date in respect of such Forward Contract Expiration *FC*, zero (0); or (ii) otherwise, the number of calendar days falling in the period commencing on, and including, the Relevant Forward Settlement Date and ending on, but excluding, the Forward Contract Settlement Date in respect of such Forward Contract Expiration *FC*; and "**Tenor$_t$(S,L)**" means, in respect of any day t, the Reference Short Forward Tenor in respect of such day t and Forward Contract Expiration *FC* and the Reference Long Forward Tenor in respect of such day t and Forward Contract Expiration *FC*, the number of calendar days falling in the period commencing on, and including, the Forward Settlement Date in respect of such Reference Short Forward Tenor and such day t and ending on, but excluding, the Forward Settlement Date in respect of such Reference Long Forward Tenor and such day t. For the avoidance of doubt, if (i) there are any adjustments to Strategy Calculation Days, the Currency Settlement Days in respect of the relevant Currency Cross or the Forward Contract Business Days in respect of the relevant Currency Cross after day t or (ii) a Non-Tradable Event occurs after day t, that would, when utilised in the calculation of the Interpolated Forward Exchange Rate in accordance with the methodology set out above, generate a different rate than the Interpolated Forward Exchange Rate that was determined by the Strategy Sponsor on day t, the Interpolated Forward Exchange Rate shall not be restated.
FX-Forward	Tradable	The Tradable Level of a Component on a Strategy Calculation Day shall be the Timely Level in respect of such day, unless a Non-Tradable Event is occurring in respect of such Component and such Strategy Calculation Day, in which case the Tradable Level of a Component shall be determined in accordance with the definition of the Timely Level of such Component, provided that references to "t" in the definitions used to determine the Timely Level shall be deemed to be replaced by reference to the first day following such Strategy Calculation Day on which no Non-Tradable Event is occurring and which is a Strategy Calculation Day (such day, the "**Resolution Day**" for the purposes of this definition of Tradable Level only), provided that if the Resolution Day would fall after the First Tradable Date in respect of such Strategy Calculation Day and such Component, the Tradable Level of such Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner.
FX-Forward	Quoted Currency	The Quoted Currency of a Component shall be the Denominated Currency in respect of the relevant Currency Cross.

"**Underlying Currency Business Day**" means, in respect of the relevant Currency Cross and the Underlying Currency, (i) if such Underlying Currency is the Euro, each TARGET Business Day, or (ii) otherwise, each day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in the principal financial centre of such Underlying Currency.

3.   Interest Rate Swaps Definitions

Terms defined in this sub-section 3 of Section G: Asset Class Specific Definitions of this General Basket Strategy Base Description shall only apply to (a) each tradable instrument defined as an Instrument in this sub-section and (b) each Component calculated by reference to such an Instrument and for which the Style specified is contained in the Timely and Tradable Level Table set out in this sub-section or in the Timely and Tradable Level Table set out in Section F: General Definitions of this General Basket Strategy Base Description. This sub-section shall be read in conjunction with the definitions in Section F: General Definitions of this General Basket Strategy Base Description.

"**ISDA Definitions**" means the 2006 ISDA Definitions, as published by the International Swaps and Derivatives Association, Inc. If the ISDA Definitions are subsequently amended or supplemented, the Strategy Sponsor may (but is not obliged to), in its discretion and acting in a commercially reasonable manner, determine that one or more definitions set out herein shall be amended or supplemented accordingly.

"**Annuity**" means, in respect of an IR Swap, a value which when multiplied by a small change in the related Swap Rate, aims to measure the change in the value of such IR Swap that would result from such change in the related Swap Rate, as determined in accordance with the relevant Annuity Model and as described in the Timely and Tradable Level Table.

"**Annuity Model**" means, in respect of an IR Swap, either (i) "Annuity Model AM1" or (ii) "Annuity Model AM2", in each case being a mathematical model used to determine the Annuity in respect of such IR Swap and/or certain data inputs used to determine the Annuity in respect of such an IR Swap, as specified and more particularly described in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements. If the methodology of an Annuity Model is subsequently amended or supplemented, the Strategy Sponsor may (but is not obliged to), in its discretion and acting in a commercially reasonable manner, utilise such amended or supplemented methodology to determine the Annuity in respect of the relevant IR Swap.

"**Annuity Model AM1**" means the ISDA Standard Model dated as of 8 November 2014, being a simplified annuity model published by the International Swaps and Derivatives Association at the following page (or any applicable successor thereto): *http://www.cdsmodel.com/cdsmodel/assets/cds-model/docs/Interest%20Rate%20Curve%20Specification%20-%20All%20Currencies%20(Updated%20November%208%202014)%20Final.pdf* and, for which the source code implementation can be found at the following page (or any applicable successor thereto): *http://www.cdsmodel.com/cdsmodel/documentation.html.* If any conflict shall exist between such documentation and source code, the source code shall prevail. Discount Factors shall be calculated in accordance with the Annuity Model AM1 by constructing a zero curve using inputs such as, but not limited to, the relevant Spot Lag, the relevant Swap Fixed Leg Convention, the relevant Swap Floating Leg Convention, the relevant money market conventions, money market rates and maturity dates, swap rates and maturity dates in accordance with the relevant Annuity Source, where the relevant business day calendar shall be deemed to be "none" for all Quoted Currencies, and the Bad Day Convention shall be deemed to be "M" for all Quoted Currencies.

 "**Annuity Model AM2**" means the GS Annuity Model.

"**Annuity Source**" means, in respect of an IR Swap and an Annuity Model, the data source from which certain data inputs (which may include, but are not limited to, swap rates and deposit rates) required to calculate the Annuity of such IR Swap in accordance with such Annuity Model are obtained.

"**Combination Weight**" means, in respect of each Forward Swap Contract in a Forward Swap Combination Contract, the weight allocated to such Forward Swap Contract (which may be positive or negative) in such Forward Swap Combination Contract, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Current Annuity Source**" means, in respect of an IR Swap and an Annuity Model, the Annuity Source specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Current Price Source**" means, in respect of an IR Swap, the relevant Current Swap Source or the relevant Current Annuity Source, as the case may be.

"**Current Swap Source**" means, in respect of an IR Swap, the data source specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, provided that, if the Strategy Sponsor, in its reasonable judgment, determines that liquidity in transactions relating to the spot swap rate in respect of such IR Swap has moved (or anticipates that liquidity in transactions relating to such spot swap rate will move) to transactions relating to a spot swap rate published by a different data source (which may be a spot swap rate published by a different data source provider or a spot swap rate published by the same data

source provider on a different screen page and/or at a different time), in accordance with market convention, the Current Swap Source shall be such other data source as determined by the Strategy Sponsor in its discretion, acting in a commercially reasonable manner.

"**Day Count Fraction**" in respect of (i) a Forward Swap Contract and the fixed amounts or floating amounts (as applicable) notionally payable thereunder, has the meaning given to such term in the ISDA Definitions (and each reference to a "Calculation Period" in the ISDA Definitions shall be deemed to be a reference to the fixed amount calculation period or the floating amount calculation period, as applicable, under such Forward Swap Contract), or (ii) a Deposit Instrument, has the meaning given to the "Floating Rate Day Count Fraction" term in the ISDA Definitions (each reference to a "Floating Rate Option" in the ISDA Definitions shall be deemed to be a reference to such Deposit Instrument, and each reference to a "Calculation Period" in the ISDA Definitions shall be deemed to be a reference to the term in respect of such Deposit Instrument).

"**Decision Date**" means, in respect of a Rebalancing Date (and determined in relation to such Rebalancing Date in accordance with the Decision Date Rule), the Strategy Calculation Day on which the Strategy Calculation Agent determines the Immediate Component Weight of each of the Immediate Components included in a GS Strategy for such Rebalancing Date.

"**Decision Date Rule**" means the rule used to determine the Decision Date in respect of each Rebalancing Date, as specified in the Relevant Specifications Annex.

"**Deposit Instrument**" means a hypothetical agreement between two parties, pursuant to which (i) one party agrees to deposit an amount denominated in the Quoted Currency at a future date with the other party, and (ii) the other party agrees to return such amount at a specified later date with interest.

"**Discount Factor**" means, in respect of two dates, an Annuity Model and an Annuity Source, the amount of currency a hypothetical market participant is willing to pay on the first date in exchange for one unit of currency to be received on the second date.

"**EUR**" means euro.

"**EURIBOR**" means, in respect of a relevant day, the interest rate for deposits for a period of the designated maturity in EUR which appears on the Reuters Screen EURIBOR01 Page (or any successor thereto) as of 11:00 a.m. Brussels Time on such relevant day.

"**First Tradable Date Convention**" means, in respect of an IR Swap and any date (for the purposes of this definition, the "**Relevant Date**") specified to be subject to adjustment in accordance with such First Tradable Date Convention, if a Non-Tradable Event occurs on the original date on which the Relevant Date is scheduled to fall, then the Relevant Date shall be deemed to be the First Tradable Date in respect of such IR Swap and such original date.

"**Forward Swap Contract**" means any IR Swap with the same terms as the Quoted Currency, the Swap Start Date, the Swap Term and the Swap Conventions specified in respect of an Immediate Component Template in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Forward Swap Combination Contract**" means a set of one or more Forward Swap Contracts (as identified by the related Immediate Component Template), each with its respective Combination Weight in such Forward Swap Combination Contract.

"**GBP**" means Pound Sterling.

"**GS Annuity Model**" means, in respect of any day, the Goldman Sachs proprietary mathematical model used as of such day to determine the Annuity in respect of an IR Swap as the sum of the relevant discount factors weighted by the corresponding day count fractions in respect of such IR Swap. The GS Annuity Model is also used to adjust the annuity of an IR Swap that is determined by reference to published spot swap rates, deposit rates and the Annuity Model AM1, so that it reflects as closely as possible the level of the annuity of such IR Swap at which hypothetical transactions could be executed. The GS Annuity Model may change from time to time and the Strategy Sponsor will not be obliged to consider any GS Strategy when making any such changes and will not have any liability for the effect of such changes on any GS Strategy.

"**GS Interest Rate Curve**" means the Goldman Sachs proprietary interest rate curve data prevailing from time to time which contains spot interest rate data (including but not limited to spot swap rates and deposit rates) and is calculated in accordance with a Goldman Sachs proprietary methodology that can be used to adjust a published spot swap rate so that it reflects as closely as possible the level of a forward swap rate at which hypothetical

transactions could be executed. Spot interest rate data from the GS Interest Rate Curve may also be used to calculate the Annuity of an IR Swap in accordance with the relevant Annuity Model.

"**Instrument**" means a Forward Swap Contract, a Reference Spot Swap Contract or Forward Swap Combination Contract (as applicable) which is a Component or which is used to determine the level of a Component or the GS Strategy.

"**Instrument Trading Day**" means a Swap Business Day.

"**Instrument Valuation Data**" means any Swap Rate which is used to determine the level of a Component or the GS Strategy.

"**IR Swap**" means a hypothetical interest rate swap transaction (which may be a spot interest rate swap transaction or a forward interest rate swap transaction) between two parties, pursuant to which:

(i)   one party is required to pay, in respect of each specified floating rate period during the term of such transaction, an amount denominated in the Quoted Currency and calculated at a specified floating rate of interest on a specified notional amount of the Quoted Currency; and

(ii)   the other party is required to pay, in respect of each specified fixed rate period during the term of such transaction an amount denominated in the Quoted Currency and calculated at a specified fixed rate of interest on such specified notional amount of the Quoted Currency.

All references to the term "**IR Swap**" (save where the context otherwise requires) shall be deemed to include all Forward Swap Contracts or Reference Spot Swap Contracts with respect to the IR Swap in question.

"**JPY**" means Japanese Yen.

"**LIBOR**" means, in respect of a relevant day, the interest rate for deposits for a period of the designated maturity in the relevant currency, which appears on:

(i)   the Reuters Screen LIBOR01 Page (or any successor thereto) as of 11:00 a.m. London Time on such relevant day if the relevant currency is USD;

(ii)   the Reuters Screen LIBOR01 Page (or any successor thereto) as of 11:00 a.m. London Time on such relevant day if the relevant currency is GBP; or

(iii)   the Reuters Screen LIBOR01 Page (or any successor thereto) as of 11:00 a.m. London Time on such relevant day if the relevant currency is JPY.

"**Market Disruption Event**" means, in respect of an Instrument and a Strategy Calculation Day, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(i)   any data input used to calculate (a) the Swap Rate of the relevant Forward Swap Contract or the relevant Reference Spot Swap Contract, (b) the Annuity of a Forward Swap Contract or (c) any other data input which is used to determine the level of such Instrument, is not published, calculated by or otherwise made available by both the relevant Current Price Source and the relevant Previous Price Source on such Strategy Calculation Day, provided that such Strategy Calculation Day is also a Swap Business Day in respect of such Instrument, or, such data input has ceased to be published or calculated by the relevant Price Source and has not been replaced by a successor Price Source;

(ii)   it is or becomes impossible or not reasonably practicable for the Strategy Sponsor to obtain a Swap Rate or Annuity which is used to determine the level of an Instrument from the relevant Price Source or any other source for purposes of the GS Strategy; or

(iii)   the occurrence or existence at any time, of any event or circumstance that (a) disrupts or impairs the ability of any market participant, after using commercially reasonable efforts, to acquire, establish, re-establish, substitute, maintain, unwind, or dispose of all or any portion of any hedge position relating to such Instrument or the GS Strategy, or any transaction linked to the GS Strategy, or to realise, recover or remit the proceeds of any such hedge position, or (b) causes or would cause any such market participant to incur a materially increased cost in doing so, including due to any capital requirements or other law or regulation.

"**Non-Tradable Event**" means, in respect of an Instrument and a Strategy Calculation Day, the occurrence of any one of the following events, as determined by the Strategy Sponsor:

(i)   such Strategy Calculation Day is not a Swap Trading Day; or

(ii)   a Market Disruption Event is occurring or existing in respect of such Instrument on such Strategy Calculation Day;

an adjustment event as described in paragraph 2(iii)(c) of Section E: *Consequences of Adjustment Events* of this General Basket Strategy Base Description is occurring or existing in respect of such Instrument on such Strategy Calculation Day."**Previous Annuity Source**" means, in respect of an IR Swap and an Annuity Model, the Annuity Source specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Previous Price Source**" means, in respect of an IR Swap, the relevant Previous Swap Source or the relevant Previous Annuity Source, as the case may be.

"**Previous Swap Source**" means, in respect of an IR Swap, the data source specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Price Source**" means, in respect of an IR Swap, the relevant Current Swap Source, the relevant Previous Swap Source, the relevant Current Annuity Source or the relevant Previous Annuity Source, as the case may be.

"**Reference Spot Swap Contract**" means, in respect of a Forward Swap Contract and any day t, an IR Swap with the same terms as the Swap Term, the Quoted Currency and the Swap Conventions as such Forward Swap Contract, but in respect of which:

(i)   the Swap Start Date is day t, subject to adjustment in accordance with the Swap Business Day Convention;

(ii)   the Swap Effective Date is the day falling the number of Swap Business Days equal to the Spot Lag after day t, subject to adjustment in accordance with the Swap Business Day Convention;

(iii)   the Swap Maturity Date is the Swap Business Day falling the number of days, weeks, months or years equal to the Swap Term after such Swap Effective Date, subject to adjustment in accordance with the Swap Business Day MF Convention; and

(iii)   all other relevant dates defined in respect of such IR Swap shall be adjusted accordingly to reflect such Swap Effective Date and such Swap Maturity Date, in each case subject to adjustment in accordance with the Swap Business Day Convention or the Swap Business Day MF Convention, as applicable.

"**Spot Lag**" means, in respect of an IR Swap, the non-negative integer specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Swap Business Day**" means, in respect of an IR Swap and the relevant Quoted Currency and unless otherwise specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements:

(i)   if such Quoted Currency is EUR, each TARGET Business Day;

(ii)   if such Quoted Currency is JPY, each day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in Tokyo and London;

(iii)   if such Quoted Currency is USD, each day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in New York and London; or

(iv)   otherwise, each day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in the principal financial centre of such Quoted Currency.

"**Swap Business Day Convention**" means, in respect of any date (for the purposes of this definition, the "**Relevant Date**") specified to be subject to adjustment in accordance with such Swap Business Day Convention, if the original date on which the Relevant Date is scheduled to fall is not a Swap Business Day, then the Relevant Date will be the Swap Business Day immediately following such original date.

"**Swap Business Day MF Convention**" means, in respect of any date (for the purposes of this definition, the "**Relevant Date**") specified to be subject to adjustment in accordance with such Swap Business Day MF Convention, if the original date on which the Relevant Date is scheduled to fall is not a Swap Business Day, then the Relevant Date will be the Swap Business Day immediately following such original date, unless that day falls in the next calendar month, in which case that date will be the first preceding day that is a Swap Business Day.

"**Swap Clearing Convention**" means, in respect of a Forward Swap Contract, the then prevailing generally accepted clearing venue to which such Forward Swap Contract should or could be submitted for clearing, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Swap Conventions**" means, in respect of a Forward Swap Contract, the Swap Floating Leg Reference Rate, the Swap Floating Leg Convention, the Swap Fixed Leg Convention, and the Swap Clearing Convention (and any other convention or parameter specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements).

"**Swap Discount Date**" means, in respect of a Forward Swap Contract, the date specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements), or if not so specified, the Swap Effective Date in respect of such Forward Swap Contract.

"**Swap Effective Date**" means, in respect of an IR Swap, the first day of the term of such IR Swap. In respect of a Forward Swap Contract, the Swap Effective Date shall be the date falling the number of Swap Business Days equal to the relevant Spot Lag after the relevant Swap Start Date.

"**Swap Fixed Leg Calculation Period**" means, in respect of an IR Swap, each period from, and including, a Swap Fixed Leg Payment Date to, but excluding, the next following Swap Fixed Leg Payment Date during the relevant Swap Term, provided that (i) the initial Swap Fixed Leg Calculation Period will commence on, and include, the relevant Swap Effective Date, and (ii) the final Swap Fixed Leg Calculation Period will end on, but exclude, the relevant Swap Maturity Date.

"**Swap Fixed Leg Conventions**" means, in respect of an IR Swap, each of (i) the frequency of each payment date in respect of which fixed amounts are notionally payable under the terms of such IR Swap, and (ii) the Day Count Fraction to be applied in the calculation of such fixed amounts.

"**Swap Fixed Leg Payment Dates**" means, in respect of an IR Swap and unless otherwise specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, the set of periodic payment dates during the relevant Swap Term in respect of which fixed amounts are notionally payable under the terms of such IR Swap, as determined in accordance with the relevant Swap Fixed Leg Convention, such that each payment date shall fall on the same day of the month as the relevant Unadjusted Swap Maturity Date and subject to adjustment in accordance with the Swap Business Day MF Convention. The last Swap Fixed Leg Payment Date in respect of an IR Swap shall be the relevant Swap Maturity Date.

"**Swap Floating Leg Reference Rate**" means, in respect of an IR Swap, the reference rate of interest for the relevant Quoted Currency which is used to calculate the floating amounts that are notionally payable under the terms of such IR Swap, as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements. If, in respect of an IR Swap and any day, the Strategy Sponsor determines that any of the following events has occurred:

(i)   the supervisor of the benchmark administrator of such Swap Floating Leg Reference Rate makes a public statement announcing the bankruptcy of such administrator (and there is no successor administrator);

(ii)   the benchmark administrator of such Swap Floating Leg Reference Rate makes a public statement announcing it has ceased or will cease to provide the benchmark permanently or indefinitely (and there is no successor administrator);

(iii)   the supervisor of the benchmark administrator of such Swap Floating Leg Reference Rate makes a public statement that the benchmark has been or will be permanently or indefinitely discontinued;

(iv)   the supervisor of the benchmark administrator of such Swap Floating Leg Reference Rate makes a public statement that the benchmark may no longer be used; or

(v)   the Strategy Sponsor determines that there has been a material change (or it has been announced that a material change will be made) to the definition, methodology or formula for calculating such Swap Floating Leg Reference Rate,

and if such IR Swap is a Component or is used to determine the level of a Component, the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, replace or remove such IR Swap or any Component to which such IR Swap is linked from the GS Strategy at the earliest possible opportunity as it determines to be commercially reasonable in order for the Strategy Timely Level and the Strategy Tradable Level to continue to be calculated notwithstanding the relevant circumstances, and in such case, the Strategy Sponsor may make such adjustment(s) to the Strategy Rules or to the composition of the GS Strategy as it determines to be necessary, in its discretion and acting in a commercially reasonable manner, to reflect such change(s).

"**Swap Floating Leg Conventions**" means, in respect of an IR Swap, each of (i) the frequency of each payment date in respect of which floating amounts are notionally payable under the terms of such IR Swap, and (ii) the Day Count Fraction to be applied in the calculation of such floating amounts.

"**Unadjusted Swap Maturity Date**" means, in respect of an IR Swap, the last day of the term of such IR Swap. In respect of an IR Swap, the Swap Maturity Date shall be the date falling the number of days, weeks, months or years equal to the relevant Swap Term after the relevant Swap Effective Date. For the avoidance of doubt if such resulting date shall fall on 29th of February in a non-leap year, 28th of February of such year shall be used instead.

"**Swap Maturity Date**" means the Unadjusted Swap Maturity Date subject to adjustment in accordance with the Swap Business Day MF Convention.

"**Swap Rate**" means, in respect of an IR Swap, the fixed rate of interest (expressed as a per annum rate) which is used to calculate the fixed amounts that are notionally payable under the terms of such IR Swap.

"**Swap Start Date**" means, in respect of an IR Swap, the date specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, subject to adjustment in accordance with the First Tradable Date Convention.

"**Swap Term**" means, in respect of an IR Swap, the scheduled term of such IR Swap (for the avoidance of doubt prior to any adjustment in accordance with the Swap Business Day MF Convention) as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Swap Trading Day**" means, in respect of an IR Swap and the relevant Quoted Currency and unless otherwise specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements:

(i)   if such Quoted Currency is USD, each Swap Business Day which is also a Strategy Calculation Day and such day is not a day denoted as "Recommended Close" for the U.S. by the Securities Industry and Financial Markets Association on http://www.sifma.org/Services/Holiday-Schedule/;

(ii) if such Quoted Currency is CAD, each Swap Business Day which is also a Strategy Calculation Day, and on such day commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in New York, and such day is not a day denoted as "Recommended Close" for the U.S. by the Securities Industry and Financial Markets Association on http://www.sifma.org/Services/Holiday-Schedule/; or

(iii) otherwise, each Swap Business Day which is also a Strategy Calculation Day.

"**Target Annuity**" means, in respect of a Forward Swap Combination Contract, the value specified as such in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

"**Timely and Tradable Level Table**" means the following table:

Style	Timely/ Tradable/ Quoted Currency	Provisions
IR-Swap	Timely	The Timely Level in respect of Forward Swap Contract *FS* and any day *t* shall be determined as follows: $$L_t(FS) = \big(FSR_s(FS) - FSR_t(FS)\big) \times A_t(FS)$$ If such day t is not a Swap Trading Day then $L_t(FS)$ shall be the Timely Level in respect of Forward Swap Contract FS and the immediately preceding Swap Trading

Day.

Where:

"**FSR$_s$(FS)**" means the Swap Rate in respect of such Forward Swap Contract *FS* and Execution Start Date *s*, as determined in accordance with the definition of FSR$_t$(FS) provided that each reference to "day *t*" is deemed to be a reference to "Execution Start Date *s*";

"**L$_t$(FS)**" means the Timely Level in respect of such Forward Swap Contract *FS* and day *t*;

"**FSR$_t$(FS)**" means the Swap Rate in respect of such Forward Swap Contract *FS* and day *t*, as determined in accordance with the formula below:

$$FSR_t(FS) = BSR_t(FS) + SRA_{t-1}(FS)$$

If Fwd Period is less than or equal to FP Cutoff, and if such day *t* is a day on which SR$_t$(S,CSS) is not published or not available on such day *t*, then FSR$_t$(FS) shall be deemed to be the Swap Rate SR$_t$(FS,PSS) in respect of Forward Swap Contract *FS*, and day *t*, as determined in accordance with the Previous Swap Source *PSS*.

If Fwd Period is greater than the FP Cutoff, and if such day *t* is a day on which the Current Swap Source *CSS* does not publish or make available on date *t* any value used in the calculation of FSR$_t$(FS) (each such value, an "**Affected Value**"), then FSR$_t$(FS) in respect of such day *t* shall be calculated by the Index Sponsor using, in place of any Affected Values, such values published or made available by the Previous Swap Source *PSS* on day *t*;

"**BSR$_t$(FS)**" means the Base Swap Rate in respect of such Forward Swap Contract *FS* and day *t*, as determined in accordance with the formula below:

$$BSR_t(FS) = \begin{cases} if\ Fwd\ Period \leq FP\ Cutoff: SR_t(S, CSS) \\ if\ Fwd\ Period > FP\ Cutoff: IFR_t(FS, CSS) \end{cases}$$

"**SRA$_{t-1}$(FS)**" means the Swap Rate Adjustment in respect of such Forward Swap Contract *FS* and day *t-1*, as determined in accordance with the formula below:

$$SRA_{t-1}(FS) = \begin{cases} if\ Fwd\ Period \leq FP\ Cutoff: SR_{t-1}(FS, PSS) - SR_{t-1}(S, PSS) \\ if\ Fwd\ Period > FP\ Cutoff: SR_{t-1}(FS, PSS) - IFR_{t-1}(FS, PSS) \end{cases}$$

Where:

"**Fwd Period**" means the number of Swap Business Days, days, weeks, months or years from and including day t to (but excluding) the Swap Start Date in respect of the Forward Swap Contract *FS*;

"**FP Cutoff**" means the Forward Period Cutoff as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, or if not so specified, shall be 30 Swap Business Days;

"**Current Swap Source *CSS***" means the Current Swap Source in respect of Reference Spot Swap Contract *S* or Forward Swap Contract *FS*;

"**Previous Swap Source *PSS***" means the Previous Swap Source in respect of Reference Spot Swap Contract *S* or Forward Swap Contract *FS*;

"**Swap Source SS**" may be the Current Swap Source *CSS* or the Previous Swap Source *PSS* (as applicable).

"**Reference Spot Swap Contract S**" means the Reference Spot Swap Contract in respect of Forward Swap Contract *FS* and day *t*;

"**SR$_t$(S,CSS)**" means the Swap Rate published by the Current Swap Source *CSS* in respect of Reference Spot Swap Contract *S* on day *t*, as determined by the Strategy Sponsor;

"**SR$_t$(FS,PSS)**" means the Swap Rate in respect of Forward Swap Contract *FS* and day *t*, as determined in accordance with the Previous Swap Source *PSS*;

"**SR$_{t-1}$(FS,PSS)**" means the Swap Rate in respect of Forward Swap Contract *FS* and Swap Business Day *t-1*, as determined in accordance with the Previous Swap Source *PSS*;

"**SR$_{t-1}$(S,PSS)**" means the Swap Rate in respect of Reference Spot Swap Contract *S* and Swap Business Day *t-1*, as determined in accordance with the Previous Swap Source *PSS*; and

"**t-1**" means the Swap Business Day immediately preceding day *t*;

IFR$_t$(FS,CSS)" means the Interpolated Forward Rate in respect of Forward Swap Contract *FS,* Current Swap Source *CSS* and day *t*;

"**IFR$_t$(FS,SS)**" means the Interpolated Forward Rate in respect of such Forward Swap Contract *FS,* Swap Source *SS* and day *t*, as determined in accordance with the formula below:

$$IFR_t(FS, SS) = \frac{ISR_t(S_{Fwd+Mat}, SS) \times IA_t(S_{Fwd+Mat}) - ISR_t(S_{Fwd}, SS) \times IA_t(S_{Fwd})}{IA_t(S_{Fwd+Mat}) - IA_t(S_{Fwd})}$$

Where:

"**Mat**" means the number of days, weeks, months or years of the Swap Term in respect of the Forward Swap Contract *FS.* For the avoidance of doubt, in case of a 1y10y IR Swap this would be 10 years;

"**S$_{Fwd+Mat}$**" means the Reference Spot Swap Contract *S$_{Fwd+Mat}$* in respect of Forward Swap Contract *FS,* in respect of which the Swap Maturity Date in respect of such Reference Spot Swap Contract is the Swap Maturity Date in respect of Forward Swap Contract FS;

"**S$_{Fwd}$**" means the Reference Spot Swap Contract *S$_{Fwd}$* in respect of Forward Swap Contract *FS,* in respect of which the Swap Maturity Date in respect of such Reference Spot Swap Contract is the Swap Effective Date in respect of Forward Swap Contract FS;

"**ISR$_t$(S$_{Fwd+Mat}$,SS)**" means the Interpolated Spot Rate in respect of Reference Spot Swap Contract *S$_{Fwd+Mat}$,* the Swap Source *SS* and the day *t*;

"**ISR$_t$(S$_{Fwd}$,SS)**" means the Interpolated Spot Rate in respect of Reference Spot Swap Contract *S$_{Fwd}$,* the Swap Source *SS* and the day *t*;

"**A$_t$(S$_{Fwd+Mat}$)**" means the Annuity in respect of   Reference Spot Swap

Contract **S_{Fwd+Mat}** and day *t*;

"**A_t(S_{Fwd})**" means the Annuity in respect of Reference Spot Swap Contract **S_{Fwd}** and day *t*;

"**IFR_{t-1}(FS,SS)**" means the Interpolated Forward Rate in respect of such Forward Swap Contract *FS,* Swap Source *SS* and day *t-1;*

"**ISR_t(S,SS)**" means the Interpolated Spot Rate in respect of such Reference Spot Swap Contract *S,* Swap Source *SS* and day *t*, as determined in accordance with the formula below:

$$ISR_t(S,SS) = SR_t(S_{ST},SS) + [SR_t(S_{LT},SS) - SR_t(S_{ST},SS)] \times \frac{DCF(S_{ST},S)}{DCF(S_{ST},S_{LT})}$$

"**IA_t(S)**" means the Interpolated Annuity in respect of such Reference Spot Swap Contract *S, a*nd day *t*, as determined in accordance with the formula below:

$$IA_t(S) = A_t(S_{ST}) + [A_t(S_{LT}) - A_t(S_{ST})] \times \frac{DCF(S_{ST},S)}{DCF(S_{ST},S_{LT})}$$

Where:

"**ST**" means the Short Dated Term, which is (i) the Swap Term of Reference Spot Swap Contract *S* or (ii) the term of the relevant Deposit Instrument, as applicable, if such term is scheduled to be published by the Current Annuity Source *CAS*. If such term is not scheduled to be published by the Current Annuity Source *CAS*, ST shall be the term closest to (but shorter than) the Swap Term of Reference Spot Swap Contract *S* that is scheduled to be published by the Current Annuity Source *CAS*, as applicable;

"**S_{ST}**" means (i) the Reference Spot Swap Contract *S_{ST}* in respect of Forward Swap Contract *FS,* where the Swap Term shall be the Short Dated Term *ST*, or (ii) the relevant Deposit Instrument with term ST published by the Current Annuity Source CAS, as applicable;

"**SR_t(S_{ST},SS)**" means (i) if S_{ST} is an IR Swap, the Swap Rate in respect of Reference Spot Swap Contract *S_{ST}*, and day *t*, published by the Swap Source *SS* in respect of such Reference Spot Swap Contract *S_{ST}* on day *t*, or (ii) if ST is a Deposit Instrument, the relevant rate with term ST as published by the Current Annuity Source *CAS* on day *t*;

"**A_t(S_{ST})**" means (i) if S_{ST} is an IR Swap, the Annuity in respect of Reference Spot Swap Contract *S_{ST}*, and day *t*, or (ii) if S_{ST} is a Deposit Instrument, the Day Count Fraction in respect of such Deposit Instrument, the Swap Floating Leg Conventions in respect of Forward Swap Contract FS, day t and the term of such Deposit Instrument;

"**LT**" means the Long Dated Swap Term, which is the Swap Term of Reference Spot Swap Contract *S* if such term is scheduled to be published by the Current Swap Source *CSS*. If such term is not scheduled to be published by the Current Swap Source *CSS*, *LT* shall be the term closest to (but longer than) the Swap Term of Reference Spot Swap Contract *S* that is scheduled to be published by the Current Swap Source *CSS*;

"**S_{LT}**" means the Reference Spot Swap Contract *S* in respect of Forward Swap Contract *FS,* where the Swap Term shall be the Long Dated Swap

Term *LT*;

"**SR$_t$(S$_{LT}$,SS)**" means the Swap Rate in respect of Reference Spot Swap Contract *S$_{LT}$*, and day *t*, published by the Swap Source *SS* in respect of such Reference Spot Swap Contract *S$_{LT}$* on day *t*;

"**A$_t$(S$_{LT}$)**" means the Annuity in respect of Reference Spot Swap Contract *S$_{LT}$*, and day *t*;

"**DCF(S$_{ST}$,S)**" means the number of days in the period commencing on (and including) the Swap Maturity Date of Reference Spot Swap Contract *S$_{ST}$* and ending on (and excluding) the Swap Maturity Date of the Reference Spot Swap Contract *S*, divided by 365;

"**DCF(S$_{ST}$,S$_{LT}$)**" means the number of days in the period commencing on (and including) the Swap Maturity Date of Reference Spot Swap Contract *S$_{ST}$* and ending on (and excluding) the Swap Maturity Date of the Reference Spot Swap Contract *S$_{LT}$*, divided by 365 (or, if zero, the DCF(S$_{ST}$,S$_{LT}$), shall be one (1)).

"**A$_t$(FS)**" means the Annuity in respect of Forward Swap Contract *FS* and day *t*, as determined in accordance with the following formula:

$$A_t(FS) = A_t(FS, CAS, AM1) + AA_{t-1}(FS, PAS, AM1, AM2)$$

Where:

"**A$_t$(FS,CAS,AM1)**" means the Annuity in respect of such Forward Swap Contract *FS* and day *t*, as determined in accordance with the Current Annuity Source *CAS* and the Annuity Model *AM1.* If such day *t* is not a day on which the Current Annuity Source *CAS* is scheduled to publish any value used in the methodology of the Annuity Model *AM1* for the purposes of calculating such Annuity, or any such value is otherwise not published or available on such day *t* (each such value, an "**Affected Value**"), then A$_t$(FS,CAS,AM1) in respect of such day *t* shall be calculated by the Index Sponsor using, in place of any Affected Values, such values published by the Previous Annuity Source *PAS* on day *t*;

"**AA$_{t-1}$(FS,PAS,AM1,AM2)**" means, the Annuity Adjustment in respect of Forward Swap Contract *FS* and Swap Business Day *t-1*, a value which aims to adjust the annuity calculated in accordance with the Annuity Model AM1 and using data published by the Current Annuity Source *CAS* so that it reflects as closely as possible the level of the annuity of such Forward Swap Contract *FS* at which hypothetical transactions could be executed, as determined in accordance with the following formula:

$$AA_{t-1}(FS, PAS, AM1, AM2) = A_{t-1}(FS, PAS, AM2) - A_{t-1}(FS, PAS, AM1)$$

"**A$_{t-1}$(FS,PAS,AM2)**" means the Annuity in respect of such Forward Swap Contract *FS* and Swap Business Day *t-1*, as determined in accordance with the Previous Annuity Source *PAS* and the Annuity Model *AM2*;

"**A$_{t-1}$(FS,PAS,AM1)**" means the Annuity in respect of such Forward Swap Contract *FS* and Swap Business Day *t-1*, as determined in accordance with the Previous Annuity Source *PAS* and the Annuity Model *AM1*;

		"**Current Annuity Source *CAS***" means the Current Annuity Source in respect of Forward Swap Contract *FS* and the Annuity Model *AM1*;
		"**Previous Annuity Source *PAS***" means the Previous Annuity Source in respect of Forward Swap Contract *FS* and the Annuity Model *AM1* or the Annuity Model *AM2*, as the case may be; and
		"**t-1**" means the Swap Business Day immediately preceding day *t*;
		"**Annuity**" in respect of a Forward Swap Contract *FS*, Annuity Source *AS*, Annuity Model *AM*, and day *t* shall be determined in accordance with the following formula:
		$$A_t(FS, AS, AM) = \sum_i DCF(t_i, t_{i+1}) \times \frac{df(SED, t_{i+1}, AS, AM)}{df(SED, SDD, AS, AM)}$$
		Where the summation is taken over the Swap Effective Date and each subsequent Swap Fixed Leg Payment Date t_i in respect of Forward Swap Contract *FS*, and:
		"**AS**" means the Current Annuity Source or Previous Annuity Source, as applicable, in respect of a Forward Swap Contract *FS*;
		"**AM**" means Annuity Model AM1 or Annuity Model AM2, as applicable, in respect of a Forward Swap Contract *FS*;
		"**DCF(t_i, t_{i+1})**" means the Day Count Fraction for the fixed amounts notionally payable in respect of such Forward Swap Contract in respect of day t_i and day t_{i+1};
		"**df(SED, SDD, AS, AM)**" means the Discount Factor in respect of the Swap Effective Date *SED* of the relevant Reference Spot Swap Contract, the Swap Discount Date *SDD* of Forward Swap Contract *FS*, the Annuity Source AS, and the Annuity Model AM; and
		"**df(SED, t_{i+1}, AS, AM)**" means the Discount Factor in respect of the Swap Effective Date *SED* of the relevant Reference Spot Swap Contract, day t_{i+1}, the Annuity Source AS and the Annuity Model AM.
IR-Swap	Tradable	The Tradable Level of a Component on a Strategy Calculation Day shall be the Timely Level in respect of such day, unless a Non-Tradable Event is occurring in respect of such Component and such Strategy Calculation Day, in which case the Tradable Level of a Component shall be determined in accordance with the definition of the Timely Level of such Component, provided that references to "*t*" in the definitions used to determine the Timely Level shall be deemed to be replaced by reference to the first day following such Strategy Calculation Day on which no Non-Tradable Event is occurring and which is a Strategy Calculation Day (such day, the "**Resolution Day**" for the purposes of this definition of Tradable Level only), provided that if the Resolution Day would fall after the First Tradable Date in respect of such Strategy Calculation Day and such Component, the Tradable Level of such Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner.
IR-Swap	Quoted Currency	The Quoted Currency of a Component shall be as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.
IR-Swap-Combina	Timely	The Timely Level in respect of Forward Swap Combination Contract *FSC* and any day *t* shall be determined as follows:

tion		$$L_t(FSC) = \sum_i CW(FS_i) \times AF_s(FS_i) \times L_t(FS_i)$$
		If such day t is not a Swap Trading Day then $L_t(FSC)$ shall be the Timely Level in respect of Forward Swap Combination Contract FSC and the immediately preceding Swap Trading Day.
		Where the summation is taken over each Forward Swap Contract *i* included in the Forward Swap Combination Contract on Strategy Calculation Day *t*, and:
		"**CWt(FSi)**" means the Combination Weight in respect of Forward Swap Contract *FSi* in such Forward Swap Combination Contract *FSC* and any day t;
		"**AFs(FSi)**" means, in respect of Forward Swap Contract *FSi*, a value which aims to adjust the annuity of Forward Swap Contract *FS* to the Target Annuity, as determined as follows:
		(i) if no Target Annuity is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, AFs(FSi) shall be equal to one (1);
		(ii) if a Target Annuity is specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements, AFs(FSi) shall be determined in accordance with the following formula:
		$$AF_s(FS_i) = \frac{TA(FSC)}{A_s(FS_i)}$$
		Where:
		"**TA(FSC)**" means the Target Annuity in respect of Forward Swap Combination Contract *FSC*;
		"**Lt(FSi)**" means the Timely Level in respect of Forward Swap Contract *FSi* and any day *t*. If Fwd Period in respect of Forward Swap Contract *FSi* is less than or equal to FP Cutoff and if such day t is a day on which a Swap Rate $SR_t(S,CSS)$ of the Reference Spot Swap Contract S in respect of any Forward Swap Contract *FSi* and day *t*, is not published or not available on such day *t*, then FSRt(FSi) used to determine Lt(FSi) for all Forward Swap Contracts *FSi* shall be deemed to be the Swap Rate SRt(FSi,PSS) in respect of Forward Swap Contract *FSi*, and day *t*, as determined in accordance with the Previous Swap Source PSS;
		"**Lt(FSC)**" means the Timely Level in respect of Forward Swap Combination Contract *FSC* and any day *t*; and
		"**As(FSi)**" means the Annuity in respect of Forward Swap Contract *FSi* and Decision Date *s*, as determined in accordance with the definition of At(FS) provided that each reference to "day *t*" is deemed to be a reference to "Decision Date *s*" and each reference to "Forward Swap Contract *FS*" is deemed to be a reference to " Forward Swap Contract *FSi*". If such Decision Date *s* is not a Swap Business Day, then each reference to "Decision Date s" is deemed to be a reference to the Swap Business Day immediately preceding such Decision Date s.
IR-Swap-Combination	Tradable	The Tradable Level of a Component on a Strategy Calculation Day shall be the Timely Level in respect of such day, unless a Non-Tradable Event is occurring in respect of such Component and such Strategy Calculation Day, in which case the Tradable Level of a Component shall be determined in accordance with the definition of the Timely Level of such Component, provided that references to "*t*" in the

		definitions used to determine the Timely Level shall be deemed to be replaced by reference to the first day following such Strategy Calculation Day on which no Non-Tradable Event is occurring and which is a Strategy Calculation Day (such day, the "**Resolution Day**" for the purposes of this definition of Tradable Level only), provided that if the Resolution Day would fall after the First Tradable Date in respect of such Strategy Calculation Day and such Component, the Tradable Level of such Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner.
IR-Swap-Combination	Quoted Currency	The Quoted Currency of a Component shall be as specified in the Relevant General Strategy Description and/or Other Relevant Strategy Documentation Elements.

GOLDMAN SACHS GENERAL INDEX PROVISIONS

Version 2.2

Dated: 15 June 2017

The following sections comprise the Goldman Sachs General Index Provisions:

Introduction, Application, Copyright and Incorporation

Section A: Determinations of the Index Sponsor and Index Calculation Agent

Section B: Change in Methodology, Index Committee and Termination

Section C: Availability and Publication of Index Values and Adjustments

Section D: Disclaimers

Section E: Conflicts of Interest

Section F: Risk Factors

1.   Introduction

This document, the Goldman Sachs General Index Provisions (as may be amended from time to time as provided herein, the "**General Index Provisions**") comprises certain rules, disclaimers, risk factors and other information applicable to certain notional rules-based proprietary indices which Goldman Sachs International or its successor(s) (the "**Index Sponsor**") may create from time to time (each, a "**GS Index**" and together, the "**GS Indices**").

In respect of a GS Index, these General Index Provisions should be read in conjunction with the following documents (to the extent that they are specified to be applicable and/or incorporated by reference therein):

(i)   the relevant base description comprising certain rules, methodology, definitions, disclaimers, conflicts of interest and other information applicable to such GS Index (in respect of such GS Index, the "**Relevant Base Description**");

(ii)   the relevant description comprising certain other rules, methodology, definitions, disclaimers, conflicts of interest and other information applicable to such GS Index, if applicable (in respect of such GS Index, the "**Relevant General Description**"); and

(iii)   any other documentation element(s) referred to in such Relevant General Description and/or in such other documentation elements (the "**Other Relevant Documentation Elements**"), in each case, where such documentation element is specified to be applicable to such GS Index.

These General Index Provisions may be amended or modified from time to time at the discretion of the Index Sponsor in accordance with the terms set out herein and upon each amendment or modification this document shall be updated to a new version. Following an update, the most recent version shall be deemed to be in force from the date of such update and replace in its entirety the preceding version such that, in the event of any conflict between the preceding version and the most recent version, the most recent version shall prevail.

2.   Application

These General Index Provisions, when read together with the Relevant Base Description, the Relevant General Description (if applicable) and the Other Relevant Documentation Elements in respect of a GS Index, will constitute the "**Index Rules**" in respect of such GS Index.

Capitalised terms used in these General Index Provisions but not defined herein have the meaning given to them in the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements, as the case may be. In respect of each GS Index, in the event of any inconsistency between the provisions of the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements and the provisions of these General Index Provisions, the provisions of the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements will prevail. In respect of each GS Index, in the event of any inconsistency between the provisions of the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements, the provisions shall prevail according to the order specified in such documentation elements.

A GS Index may be linked to one or more other GS Indices, each of which may in turn be linked to one or more other GS Indices, and so on (each such index, an "**Underlying GS Index**"). In such case, potential investors should also refer to the relevant index description or rules relating to each such Underlying GS Index (which may or may not comprise these General Index Provisions, a Relevant Base Description, a Relevant General Description or Other Relevant Documentation Elements) for the specific description, methodology, rules, disclaimers, risk factors and/or conflicts of interest applicable to such Underlying GS Index.

In respect of each GS Index, the Index Sponsor will appoint a calculation agent (in respect of such GS Index, the "**Index Calculation Agent**") as specified in the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements to make certain determinations and calculations and to publish the value of such GS Index as more particularly described in the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements. The Index Sponsor does not have any obligation to ensure that the relevant Index Calculation Agent continues to publish, and the Index Sponsor may discontinue publication of, the value of any GS Index at any time. The Index Sponsor may at any time in respect of a GS Index appoint one or more replacement Index Calculation Agents, including itself or an affiliate.

The Index Sponsor may also appoint other agents and/or third party data providers in relation to a GS Index to obtain certain inputs necessary to compute the value of such GS Index. The Index Sponsor does not have any

obligation to ensure that these agents and/or third party providers continue to provide inputs necessary to compute the value of a GS Index. The Index Sponsor may change any agent and/or third party data provider appointed in respect of a GS Index at any time.

None of the GS Indices are sponsored, endorsed, sold, or promoted by the sponsor of any underlying index, financial instrument, asset, price, level, component or other underlying (each, an "**Index Component**") comprising, directly or indirectly, a GS Index, other than where the Index Sponsor is also the sponsor of such Index Component. Such sponsor(s) does(do) not make any representation whatsoever, whether express or implied, either as to the results to be obtained from the use of any such Index Component and/or the prices, levels or values at which any Index Component stands at any particular time on any particular date or otherwise.

Each GS Index is a synthetic product and the exposure of each GS Index to any position in an Index Component (which may itself represent a notional investment in one or more other Index Components) is purely notional. There is no actual portfolio of underlying indices, financial instruments, assets or other underlyings or components to which any person is entitled or in which any person has any ownership interest (whether legal, beneficial or otherwise), and there is no obligation on the Index Sponsor or the Index Calculation Agent to promote or purchase, enter into, and/or hold positions in any Index Component, or transactions or investments that are linked to any Index Component at any time. References in any Index Rules to any investment, disposal or acquisition of any Index Component should not be construed as imposing any obligation on the Index Sponsor, the Index Calculation Agent or any person to actually acquire or dispose of any such Index Component, investment or other property but are references to and relate solely to the calculation of the value of each GS Index.

Investors in any product linked to a GS Index should read and understand these General Index Provisions. **IN PARTICULAR, PRIOR TO MAKING ANY INVESTMENT DECISION, INVESTORS MUST READ SECTION D:** *DISCLAIMERS***, SECTION E:** *CONFLICTS OF INTEREST* **AND SECTION F:** *RISK FACTORS* **OF THESE GENERAL INDEX PROVISIONS, IN ADDITION TO THE ADDITIONAL DISCLAIMERS, CONFLICTS OF INTEREST AND RISK FACTORS (IF ANY) SET OUT IN THE RELEVANT BASE DESCRIPTION, THE RELEVANT GENERAL DESCRIPTION AND/OR THE OTHER RELEVANT DOCUMENTATION ELEMENTS IN RESPECT OF EACH GS INDEX.**

3. Copyright

The Index Sponsor owns the copyright and all other rights to the applicable GS Indices. No use or publication may be made of a GS Index or any value thereof without the prior written approval of the Index Sponsor.

4. Incorporation

Any or all of the provisions and sections of these General Index Provisions may be incorporated into and made applicable to the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements in respect of a GS Index. When the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements in respect of a GS Index incorporates these General Index Provisions, unless such documentation element states otherwise, the version of these General Index Provisions in effect as of the calendar day immediately prior to the date of such documentation elements to fall latest in time shall be deemed to be applicable, as may be updated from time to time.

Section A: Determinations of the Index Sponsor and Index Calculation Agent

In respect of each GS Index, all determinations and calculations that involve the exercise of expert judgement or discretion (other than those that are purely mechanical and, where relevant, implemented in accordance with the relevant Index Rules) made by the Index Sponsor or the Index Calculation Agent, as applicable, in respect of a GS Index shall be made in good faith and in a commercially reasonable manner. All such determinations and calculations will be made in accordance with policies and procedures of the Index Sponsor or the Index Calculation Agent (as applicable) and will (in the absence of manifest error) be final, conclusive and binding. Neither the Index Sponsor nor the Index Calculation Agent shall have any responsibility to any person for any errors or omissions in respect of any determination or calculation. In making any determinations with respect to a GS Index, the Index Sponsor and Index Calculation Agent do not owe any person any fiduciary duties in respect of a GS Index and are not required to take the interests of any person into account in making any determination with respect thereto.

Section B: Change in Methodology, Index Committee and Termination

1. Change in Methodology

In calculating and determining the value of any GS Index, the Index Calculation Agent will, subject as provided below, employ the methodology described in the relevant Index Rules with respect to calculating and determining the value of the GS Index and its application of such methodology shall (in the absence of manifest error) be conclusive and binding. While the Index Calculation Agent expects to employ the methodology described in the relevant Index Rules (in respect of each GS Index, the "**Index Methodology**") at all times to calculate and determine the value of each GS Index, it is possible that market, legal, regulatory, judicial, financial, fiscal or other circumstances (including, but not limited to, any changes to or any suspension or termination of or any other events affecting a GS Index and/or any Index Component (each as more particularly described in the relevant Index Rules in respect of such GS Index), or any other events affecting the ability of a third party data source to supply the necessary data for the purposes of calculating the value of a GS Index) will arise that would, in the view of the Index Sponsor, necessitate or make desirable a modification or change of such Index Methodology in order to preserve the ability of such GS Index to accomplish its intended commercial purpose. The Index Sponsor reserves the right to make any other changes to the composition of a GS Index or to the relevant Index Methodology or to any third party data source used to calculate the value of a GS Index as the Index Sponsor may, in its sole discretion, determine to be necessary as a result of market, legal, regulatory, judicial, financial, fiscal or other circumstances.

Accordingly, the Index Sponsor shall be entitled to make such modifications and/or changes to the Index Methodology or to any data obtained from a third party data source which is used to calculate the value of such GS Index without notice as it in its sole and absolute discretion deems appropriate, necessary or desirable, including (without limitation):

(i)   to correct any manifest error or proven error contained in the Index Rules;

(ii)   to cure, correct or supplement any ambiguity or contradictory or defective provision contained in the Index Rules;

(iii)   change the frequency of calculation of the value of a GS Index and to make such adjustment to the Index Methodology as it determines, in good faith and in a commercially reasonable manner, to be necessary to take account of the amended frequency of calculation;

(iv)   to permit the Index Calculation Agent to continue calculating and determining the value of the GS Index if market, legal, regulatory, judicial, financial, fiscal or other circumstances arise which were not reasonably foreseeable by the Index Sponsor as of the date of the relevant Index Rules and which have not been deliberately caused by the Index Sponsor, and such circumstances would prevent the Index Calculation Agent from calculating and determining the value of the GS Index, and would necessitate a modification or change of the relevant Index Methodology in order for the value of such GS Index to continue to be calculated and determined notwithstanding the relevant circumstances; and/or

(v)   to preserve the intended commercial purpose of such GS Index, where such modification and/or change is of a formal, minor or technical nature.

In making any such modifications described above in respect of a GS Index, the Index Sponsor and/or Index Committee, as applicable, will ensure that such modifications or changes will result in a methodology that is consistent in its intended commercial purpose with the relevant Index Methodology in respect of such GS Index. However, the Index Sponsor and Index Calculation Agent do not owe any person any fiduciary duties in respect of a GS Index and are not required to take the interests of any person into account in making any such modifications with respect thereto.

In the event that ambiguities arise in the calculation of the value of any GS Index, the Index Sponsor will resolve such ambiguities and, if necessary for resolution, make changes to the composition of such GS Index or the methodology of calculating such GS Index. In the event that the Index Sponsor determines that any calculation or determination in respect of any GS Index is incorrect, the Index Sponsor may, if practicable, correct calculations or determinations and publish or cause to be published such correct calculations or determinations.

In the event that the value of any Index Component which is utilised for any calculation or determination in respect of a GS Index is subsequently corrected, the Index Calculation Agent may, if practicable, use such corrected value for the purpose of such calculation or determination, and, to the extent necessary and practicable, may adjust any prior calculation or determination.

2. Index Committee

The Index Sponsor may, but is not required to, establish an index committee (the "**Index Committee**") in respect

of a GS Index. The Index Committee, if established, may comprise employees of the Index Sponsor and at least an equal number of external members with a relevant academic or professional background, as selected by the Index Sponsor in its sole and absolute discretion. The Index Sponsor may propose any modifications and/or changes to the Index Methodology of the kind described in paragraphs (i) to (v) above, without limitation, to the Index Committee for its consideration.

If an Index Committee is established, a meeting of the Index Committee will be considered quorate if (a) a majority of the Index Committee is in attendance, and (b) at least half of those in attendance are external members. For any decision of the Index Committee to be approved, the Index Committee must vote by a simple majority, including at least one external member, to approve such decision.

The role, responsibilities and powers of the Index Committee, if established, will be pre-defined by the Index Sponsor and will be limited to approving changes to the relevant Index Methodology or to any data obtained from a third party data source which is used to calculate the value of such GS Index, in each case where the Index Sponsor has made a proposal as it is permitted to do so and as contemplated above. In addition, the Index Committee, if established, may be given the power to make proposals to cure, correct or supplement ambiguities, defective provisions, errors, omissions and inconsistencies and to make administrative changes that are not economically significant. The Index Calculation Agent may from time to time consult with the Index Committee on matters of interpretation with respect to the methodology of a GS Index. For the avoidance of doubt, the Index Committee, if established, will not have greater powers than the Index Sponsor at any time.

In making or proposing any such modifications described above in respect of a GS Index, the Index Committee will ensure that such modifications or changes will result in a methodology that is consistent with the intended commercial purpose of such GS Index.

The Index Committee, if established, will keep a record of any approved amendments. Such record, and the agenda and minutes of each and any meeting of the Index Committee, will be made available to investors upon their request using the contact details given under Section C: *Availability and Publication of Index Values and Adjustments* of these General Index Provisions.

3.   **Termination**

The Index Sponsor may, in its sole and absolute discretion, at any time, for any reason (including without limitation, because it is no longer possible or practicable to calculate the value of a GS Index) and without notice, terminate the calculation and publication of any GS Index.

Section C: Availability and Publication of Index Values and Adjustments

1. General

Unless otherwise specified in the Relevant Base Description, the Relevant General Description and/or the Other Relevant Documentation Elements, the Index Calculation Agent will make available the value of each GS Index on each Index Business Day.

In respect of each GS Index, in the event that the value of any Index Component which is utilized for any calculation or determination of the value of such GS Index or the value of such GS Index is subsequently corrected, the Index Sponsor may determine the adjustment or correction to be made to the terms and values of such GS Index and, to the extent necessary or desirable, will adjust any relevant terms and values of such GS Index to account for such correction.

The Index Sponsor may, following the occurrence of certain exchange rate disruption event, non-tradable events, market disruption events or force majeure events (each a "**Disruption Event**", as more particularly described in the Relevant Base Description, Relevant General Description and/or the Other Relevant Documentation Elements) in respect of a GS Index, make certain determinations (as more particularly described in the relevant Base Description and/or the relevant Index Supplement) in respect of such GS Index.

2. Index values

The value in respect of each GS Index will be published on the relevant index publication data source or any successor page (as more particularly described in the Relevant Base Description, the Relevant General Description (if applicable) or the Other Relevant Documentation Elements) in respect of such GS Index.

Information about the past performance of a GS Index and its volatility can be obtained at the relevant index publication data source.

3. Miscellaneous

In respect of each GS Index, the availability of any publication described in this Section C: *Availability and Publication of Index Values and Adjustments* may be restricted by means determined as appropriate for such purpose by the Index Sponsor or Index Calculation Agent, in each case in its sole and absolute discretion, including, but not limited to, password protection restricting access to a limited set of persons in accordance with arrangements agreed between the Index Sponsor or Index Calculation Agent and such persons.

The Index Sponsor may, at any time and without notice, change the place and/or method of publication of the value in respect of any GS Index and/or change the frequency of publication of the value in respect of any GS Index, in its sole and absolute discretion.

Each of the Index Sponsor and the Index Calculation Agent accepts no legal liability to any person for publishing or not continuing to publish for any period of time the value of any GS Index at any particular place or any particular time.

In respect of each GS Index, the Index Sponsor will have policies and procedures in place governing the frequency with which it conducts internal reviews with respect to such GS Index and the frequency with which it consults with investors in products linked to such GS Index.

Section D: Disclaimers

The following list of disclaimers does not purport to be a complete list or explanation of all the disclaimers associated with the GS Indices.

POTENTIAL INVESTORS SHOULD REFER TO THE RELEVANT BASE DESCRIPTION, THE RELEVANT GENERAL DESCRIPTION AND/OR THE OTHER RELEVANT DOCUMENTATION ELEMENTS IN RESPECT OF EACH GS INDEX FOR SPECIFIC DISCLAIMERS RELATING TO SUCH GS INDEX.

THE GS INDICES ARE TRADEMARKS OF THE GOLDMAN SACHS GROUP.

THE GOLDMAN SACHS GROUP DOES NOT GUARANTEE THE QUALITY, ACCURACY AND/OR COMPLETENESS OF A GS INDEX, ITS METHODOLOGY, ITS CALCULATION, ANY DATA OR INFORMATION INCLUDED THEREIN, OR ANY DATA OR INFORMATION ON WHICH IT IS BASED, OR THE INDEX RULES AND THE INDEX SPONSOR SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, DELAYS OR INTERRUPTIONS HEREIN OR THEREIN OR RELATING TO ANY OF SUCH MATTERS ON THE PART OF ANY THIRD PARTY OR OTHERWISE.

NEITHER THE INDEX SPONSOR NOR THE INDEX CALCULATION AGENT (NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBSIDIARIES OR ANY OF THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, DELEGATES OR AGENTS) SHALL HAVE ANY RESPONSIBILITY TO ANY PERSON (WHETHER AS A RESULT OF NEGLIGENCE OR OTHERWISE) FOR ANY DETERMINATION MADE OR ANYTHING DONE (OR OMITTED TO BE DETERMINED OR DONE), INCLUDING WITHOUT LIMITATION ANY AMENDMENTS TO OR SUBSTITUTIONS OF ANY INDEX COMPONENTS, IN RESPECT OF ANY GS INDEX OR PUBLICATION OF THE VALUE OF ANY GS INDEX (OR THE FAILURE TO PUBLISH THE VALUE OF ANY GS INDEX) AND ANY USE TO WHICH ANY PERSON MAY PUT ANY GS INDEX OR THE VALUE OF ANY GS INDEX. EACH OF THE INDEX SPONSOR AND THE INDEX CALCULATION AGENT ACTS AS PRINCIPAL AND NOT AS FIDUCIARY AND OWES NO FIDUCIARY DUTIES IN RESPECT OF EACH GS INDEX.

IN CALCULATING THE VALUE OF ANY GS INDEX, THE INDEX CALCULATION AGENT WILL OBTAIN AND USE DATA AND INFORMATION FROM THIRD PARTY SOURCES. NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX SPONSOR (NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBSIDIARIES OR ANY OF THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, DELEGATES OR AGENTS) WILL INDEPENDENTLY VERIFY SUCH INFORMATION, GUARANTEES THE QUALITY, ACCURACY AND/OR THE COMPLETENESS OF SUCH DATA OR INFORMATION AND CONSEQUENTLY NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX SPONSOR (NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBSIDIARIES OR ANY OF THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, DELEGATES OR AGENTS) GUARANTEES THE QUALITY, ACCURACY AND/OR COMPLETENESS OF ANY GS INDEX. NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX SPONSOR (NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBSIDIARIES OR ANY OF THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, DELEGATES OR AGENTS) SHALL BE LIABLE (WHETHER IN CONTRACT, TORT OR OTHERWISE) TO ANY PERSON FOR ANY INACCURACY, OMISSION, MISTAKE OR ERROR IN THE COMPUTATION OR DISSEMINATION OF THE VALUE OF ANY GS INDEX AND NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX SPONSOR IS UNDER ANY OBLIGATION TO ADVISE ANY PERSON OF ANY INACCURACY, OMISSION, MISTAKE OR ERROR IT BECOMES AWARE OF.

NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX SPONSOR (NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBSIDIARIES OR ANY OF THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, DELEGATES OR AGENTS) MAKES ANY EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES AS TO (I) THE ADVISABILITY OF PURCHASING OR ASSUMING ANY RISK IN CONNECTION WITH ANY TRANSACTION LINKED TO ANY GS INDEX, (II) THE VALUE OF ANY GS INDEX AT ANY PARTICULAR TIME ON ANY PARTICULAR DATE, (III) THE RESULTS TO BE OBTAINED BY ANY INVESTOR IN A PRODUCT LINKED TO THE PERFORMANCE OF ANY GS INDEX OR ANY INDEX COMPONENT, OR (IV) ANY OTHER MATTER.

INVESTORS CONSIDERING ACQUIRING ANY PRODUCT LINKED TO A GS INDEX SHOULD CONSULT THEIR OWN ACCOUNTING, TAX, INVESTMENT AND LEGAL ADVISORS BEFORE DOING SO. NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX SPONSOR (NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBSIDIARIES OR ANY OF THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES,

REPRESENTATIVES, DELEGATES OR AGENTS) IS ACTING IS AN ADVISOR OR FIDUCIARY.

BEFORE INVESTORS INVEST IN ANY PRODUCT LINKED TO A GS INDEX, THEY MUST READ AND UNDERSTAND THE INDEX RULES SETTING OUT THE RULES, METHODOLOGY, DEFINITIONS, DISCLAIMERS, CONFLICTS OF INTEREST, RISK FACTORS AND OTHER INFORMATION APPLICABLE TO SUCH GS INDEX. IN PARTICULAR, AN INVESTOR MUST PAY PARTICULAR ATTENTION TO THE CONFLICTS OF INTEREST AND RISK FACTORS APPLICABLE TO SUCH GS INDEX SET OUT IN THE INDEX RULES.

NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX SPONSOR (NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBSIDIARIES OR ANY OF THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, DELEGATES OR AGENTS) MAKES, AND EACH OF THEM DISCLAIMS, ANY EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY GS INDEX OR ANY DATA OR INFORMATION INCLUDED THEREIN OR ANY DATA OR INFORMATION ON WHICH IT IS BASED.

EACH GS INDEX HAS BEEN STRUCTURED, THE VALUE OF EACH GS INDEX IS CALCULATED AND DETERMINATIONS RELATING TO EACH GS INDEX ARE MADE, WITHOUT REGARD TO ANY TRANSACTION LINKED TO SUCH GS INDEX. THE INDEX SPONSOR AND THE INDEX CALCULATION AGENT HAVE NO OBLIGATION TO TAKE THE INTERESTS OF ANY PERSON INTO CONSIDERATION IN STRUCTURING A GS INDEX, CALCULATING THE VALUE OF SUCH GS INDEX, EXERCISING ANY DISCRETION IN RELATION TO ANY GS INDEX OR MAKING DETERMINATIONS RELATING TO SUCH GS INDEX, AS THE CASE MAY BE. THE INDEX SPONSOR AND THE INDEX CALCULATION AGENT SHALL NOT BE LIABLE FOR ANY LOSS SUFFERED BY ANY PERSON (INCLUDING ANY INVESTOR IN, OR ANY ISSUER, ARRANGER OR OTHER PERSON OF, A PRODUCT LINKED TO THE PERFORMANCE OF ANY GS INDEX OR ANY INDEX COMPONENT) AS A RESULT OF EXERCISING, OR REFRAINING FROM EXERCISING, ITS DISCRETION IN RESPECT OF ANY GS INDEX.

WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL THE INDEX CALCULATION AGENT OR THE INDEX SPONSOR HAVE ANY LIABILITY (WHETHER IN CONTRACT, TORT OR OTHERWISE) TO ANY PERSON FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR ANY OTHER DAMAGES (INCLUDING LOST PROFITS) EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

NOTHING IN THIS DISCLAIMER SHALL EXCLUDE OR LIMIT LIABILITY TO THE EXTENT SUCH EXCLUSION OR LIMITATION IS NOT PERMITTED BY LAW.

Section E: Conflicts of Interest

The following list of conflicts does not purport to be a complete list or explanation of all the conflicts of interests associated with the GS Indices.

POTENTIAL INVESTORS SHOULD REFER TO THE RELEVANT BASE DESCRIPTION, THE RELEVANT GENERAL DESCRIPTION AND/OR THE OTHER RELEVANT DOCUMENTATION ELEMENTS IN RESPECT OF EACH GS INDEX FOR SPECIFIC CONFLICTS OF INTEREST RELATING TO SUCH GS INDEX.

Overview of the roles of the Goldman Sachs Group ("GSG")

GSG members may have multiple roles in connection with the GS Indices:

- If Goldman Sachs International is the Index Calculation Agent of a GS Index, Goldman Sachs International is responsible for calculating and publishing the value of each GS Index in its capacity as Index Calculation Agent and for making certain determinations in respect of a GS Index from time to time in its capacity as Index Sponsor.

- The GS Indices are designed by, and are operated in accordance with, a methodology developed by the Index Sponsor. Among other things, the Index Sponsor will set the parameters within which each GS Index operates. The Index Sponsor does not have any obligation to ensure that the Index Calculation Agent continues to calculate and publish the value of each GS Index. Except in the limited circumstances set out in the relevant Index Rules, the Index Sponsor does not generally exercise any discretion in relation to the operation of each GS Index. The Index Sponsor owes no fiduciary duties in respect of each GS Index.

- GSG is a full-service financial services group and, consequently, is engaged in a range of activities that could affect the value of a GS Index and any Index Component either positively or negatively as further described below.

- GSG may be sponsors and/or calculation agents of one or more Index Components and in such capacity(ies) may have the power to make determinations that could materially affect the value of such GS Index.

- GSG may from time to time have a direct or indirect ownership interest in any third party data providers with respect to a GS Index or any Index Component (including, without limitation, any calculation agent).

Potential conflicts of interest

GSG will perform its obligations in a manner that it considers commercially reasonable but may face conflicts between the roles it performs in respect of a GS Index and its own interests. In particular, in its other businesses, GSG may have, or enter into transactions to create, a physical, economic or other interest (including an adverse and/or short interest, as the case may be) in a GS Index, products linked thereto, and/or any Index Component and investments referenced by or linked to any Index Component and may exercise remedies or take other action with respect to its interests as it deems appropriate.

The following actions could adversely affect the value of a GS Index:

- GSG may actively trade products linked to such GS Index, any Index Component, investments referenced by or linked to an Index Component and any other related investments. These activities could adversely affect the value of such GS Index, which could in turn affect the return on, and the value of, any products linked to such GS Index.

- GSG may have access to information relating to such GS Index, products linked to such GS Index, and/or an Index Component or investments referenced by or linked to an Index Component. GSG is not obliged to use that information for the benefit of any person acquiring or entering into any products linked to such GS Index.

- Certain activities conducted by GSG may conflict with the interests of those acquiring products linked to such GS Index. It is possible that GSG could receive substantial returns in respect of these activities while the value of any investment referenced to such GS Index may decline. For example:

  - GSG and other parties may issue or underwrite additional securities or trade other financial or derivative instruments or investments referenced to such GS Index or other similar indices or strategies and/or any Index Component. An increased level of investment and trading in these

securities, instruments or investments may negatively affect the performance of such GS Index and could affect the value of such GS Index and, therefore, the amount payable at maturity (or on any other payment date) on any products linked to such GS Index and the value of any such products before that date. Such securities, instruments or investments may also compete with other products linked to such GS Index. By introducing competing products into the marketplace in this manner, GSG could adversely affect the market value of any products linked to such GS Index and the amount paid by it on such products at maturity (or on any other payment date). To the extent that GSG serves as issuer, agent or underwriter of those securities or other similar instruments or investments, its interests in respect of those securities, instruments or investments may be adverse to the interests of an investor of any products linked to such GS Index.

- Although GSG is not obliged to do so, it may elect to hedge its exposure or potential or expected exposure to such GS Index, any products linked thereto, and/or any Index Component, or any investment referenced by or linked to an Index Component with an affiliate or a third party. Such affiliate or third party, in turn, is likely to directly or indirectly hedge any of its exposure or potential or expected exposure, including through transactions taking place on the futures and/or options markets. Where GSG chooses to hedge its exposure or potential or expected exposure, it may adjust or unwind such hedges by purchasing or selling products linked to such GS Index, and/or an Index Component, any investments referenced by or linked to an Index Component or any other product on or before the date such GS Index is valued for purposes of any investments referenced by such GS Index. GSG may also enter into, adjust or unwind hedging transactions relating to other instruments linked to such GS Index and/or an Index Component. Any such hedging activity may adversely affect the value of such GS Index and any products linked to such GS Index. In this regard:

  • GSG could receive substantial returns with respect to these hedging activities while the value of such GS Index and/or the value of any product linked to such GS Index may decline.

  • If GSG has hedged its exposure to an Index Component and incurs an effective rate of withholding tax that is less than the synthetic tax withholding applied in respect of a GS Index, GSG could receive substantial returns.

  • GSG could receive substantial returns if it trades in an Index Component on or before a rebalancing day and/or at levels which are different from the levels specified in the methodology for determining the value of such GS Index. Such trading may have an adverse impact on the level at which a rebalancing occurs, which will result in an adverse impact on the performance of such GS Index. In addition, such trading could generate significant returns to the Index Sponsor that will not be passed on to the investors in products linked to such GS Index.

- Certain activities conducted by GSG may conflict with the interests of those acquiring products linked to such GS Index. For example, as described above, GSG may elect to hedge its obligations, if any, with an affiliate or a third party. It is possible that GSG could receive substantial returns with respect to these activities irrespective of the performance of such GS Index and including while the value of any investment referenced to such GS Index may decline.

- GSG may also engage in trading for its proprietary accounts, for other accounts under its management or to facilitate transactions, including block transactions, on behalf of customers relating to one or more products linked to a GS Index, an Index Component or any constituent thereof and/or any investment referenced by or linked to an Index Component or any constituent thereof. In the course of these transactions, GSG's customers may receive information about such GS Index before it is made available to other investors. Any of these activities could also adversely affect the value of such GS Index directly or indirectly by affecting the level of an Index Component or any constituent thereof or the investments referenced by or linked to an Index Component or any constituent thereof and, therefore, the market value of any products linked to such GS Index and the amount paid on any such product at maturity.

• In its capacity as sponsor of such GS Index, Goldman Sachs International will have discretion under certain circumstances to make various determinations that affect such GS Index and products linked to such GS Index, including, but not limited to, those situations more particularly described in the relevant Index Rules. Goldman Sachs International may use these determinations to calculate how much cash it must pay at maturity or upon any early redemption of any such product linked to such GS Index or on any other payment date, including products issued by the GSG members. The exercise by Goldman Sachs International of this discretion could adversely affect the value of such GS Index and/or any such product

linked to such GS Index. It is possible that the exercise by the Index Sponsor of its discretion to change the relevant Index Methodology may result in substantial returns in respect of GSG's trading activities for its proprietary accounts, for other accounts under its management or to facilitate transactions on behalf of customers relating to one or more products linked to such GS Index, and/or the Index Components thereof or any investment referenced by or linked to the Index Components.

- In its capacity as sponsor of one or more Index Components, GSG may be entitled to exercise discretion over decisions that would have an adverse impact on the value of such GS Index, including, without limitation, discontinuing publication of the level of one or more Index Components. GSG will exercise any such discretion without regard to any GS Index or investors in any products linked thereto.

- GSG may in the future create and publish other indices or strategies, the concepts of which are similar, or identical, to that of a GS Index or one or more of the Index Components. The Index Components as specified in the Index Rules for such GS Index however, are the only components that will be used for the calculation of such GS Index. Accordingly, no other published indices should be treated by any investor as the level of any Index Component (except as the Index Sponsor or Index Calculation Agent may so determine, as described above).

- GSG may publish research, express opinions or provide recommendations (for example, with respect to an Index Component) that are inconsistent with investing in products linked to such GS Index, and which may be revised at any time. Any such research, opinions or recommendations may or may not recommend that investors buy or hold the relevant Index Component and could affect the value and or performance of such GS Index or of products linked to such GS Index.

- GSG may have ownership interests in sponsors of Index Components and as such may be able to influence the methodology and other features of such Index Components. In addition, GSG members may provide pricing or other data that is directly used in the calculation of the price, level or value of such Index Components (or the components thereof). The activities of GSG as contributor to any Index Components may be adverse to the interests of investors and/or counterparties to products linked to any such Index Components and may have an impact on the performance of such Index Components.

- GSG may have ownership interests in any Index Calculation Agent (or any other calculation agent with respect to an Index or Index Component) and any third party data providers with respect to an Index or any Index Component and as such may be able to influence the determinations of such an Index Calculation Agent or other calculation agent. In addition, members of the GSG may provide pricing or other data that is directly used in the calculation of the level, coupon and/or components of the Index. The activities of the GSG members as contributor to any Index may be adverse to the interests of investors and/or counterparties to products linked to any such Index and may have an impact on the performance of such Index.

Section F: Risk Factors

The following list of risk factors does not purport to be a complete list or explanation of all the risks associated with the GS Indices. Risk factors in relation to any financial instrument or product (a "product") which is linked to the performance of a GS Index may be set out in the relevant documents in respect of such product.

POTENTIAL INVESTORS SHOULD REFER TO THE RELEVANT BASE DESCRIPTION, THE RELEVANT GENERAL DESCRIPTION AND/OR THE OTHER RELEVANT DOCUMENTATION ELEMENTS IN RESPECT OF EACH GS INDEX FOR SPECIFIC RISK FACTORS RELATING TO SUCH GS INDEX.

General Risk Factors

Investors in a GS Index could lose their entire investment

The value of a GS Index depends on the performance of the Index Components, each of which may increase or decrease in value. Neither a GS Index nor any of the Index Components includes any element of capital protection or guaranteed return. The value of any Index Component, or a GS Index itself, may fall below its initial value.

If a floor is not specified to be applicable in respect of a GS Index or an Index Component then the level of that GS Index or Index Component may fall below zero and have a negative value. In this case an investment linked to a GS Index may incur losses which exceed the notional value of such investment.

If a floor is specified to be applicable in respect of a GS Index or an Index Component then the level of that GS Index or Index Component may fall to zero. In such a case, the level will remain at zero and any investment linked solely to such GS Index may have lost all of its value, in which case there will be no chance of such investment thereafter recovering.

No assurance can be given that the methodology underlying each GS Index will be successful in producing positive returns or that such GS Index will outperform any other alternative investment strategy.

Furthermore, it should be noted that the results that may be obtained from investing in any product linked to a GS Index or otherwise participating in any transaction linked to a GS Index might well be significantly different from the results that could theoretically be obtained from a direct investment in the Index Component(s) or any related derivatives.

Changes in market structure and/or increased investment in similar products may negatively affect the value of a GS Index

As a result of changes in market structure and/or due to increased investment in products using the same or similar investment rationale to that of a GS Index or any Index Component, the underlying market or economic characteristics that such GS Index or Index Component attempts to capture, measure or replicate may change, cease to exist, and/or lead to negative expected returns over any time period. This may have a negative impact on the value of a GS Index and such GS Index will not be adjusted to take account of any such changes.

Past performance of a GS Index is no guide to future performance

The actual performance of the GS Index over the life of any product linked to the GS Index as well as the amount payable at maturity or on settlement may bear little relation to the historical levels of the GS Index. It is not possible to predict the future performance of the GS Index.

Historical analysis or other statistical analysis in respect of a GS Index is no guarantee of the performance of such GS Index

Certain presentations and historical analysis, or other statistical analysis materials in respect of the operation and/or potential returns of a GS Index which may be provided are based on a number of assumptions, historical estimates, simulated analyses and hypothetical circumstances to estimate how such a GS Index may have performed prior to the Index Launch Date (as defined below). Neither the Index Sponsor nor the issuer of any product linked to a GS Index provides any assurance or guarantee that such GS Index will operate or would have operated in the past in a manner consistent with those materials. As such, any historical returns projected in such

materials or any hypothetical simulations based on these analyses or hypothetical levels, which are provided in relation to a GS Index, may not reflect the performance of, and are no guarantee or assurance in respect of the performance or returns of, such GS Index over any time period.

An investor in a product linked to a GS Index will have no rights with respect to the Index Component(s)

The investment exposure provided by a GS Index is synthetic. An investment referenced to a GS Index will therefore not make an investor a holder of, or give an investor a direct investment position in, any Index Component (or any components thereof).

The GS Indices are not actively managed

Each GS Index will be operated in accordance with the methodology set forth in the relevant Index Rules. There will be no active management of a GS Index so as to enhance returns beyond those embedded in such GS Index.

Market participants often adjust their investments promptly in view of market, political, financial or other factors. An actively managed investment may potentially respond more directly and appropriately to immediate market, political, financial or other factors than a non-actively managed strategy such as a GS Index. No assurance can be given that a GS Index will replicate or outperform a comparable strategy which is actively managed and the return on a GS Index may be lower than the return on an actively managed strategy.

The weights of the Index Components may total more or less than 100 per cent

A GS Index's absolute overall exposure to the Index Components may be greater or less than 100 per cent.

If the sum of the absolute weights of the Index Components is greater than 100 per cent the GS Index will employ leverage. In the current instance, leverage means that a GS Index will have increased exposure to changes, which may be positive or negative, in the levels of the Index Components, magnifying the volatility and risk. The performance of the GS Index will be adversely affected should the level of "long" Index Components decrease and/or the value of "short" Index Components increase.

If the sum of the absolute weights of the Index Components is less than 100 per cent the GS Index will have a reduced exposure to the Index Components and may underperform as compared to a GS Index where the exposure was greater.

An Excess Return GS Index will nearly always underperform a Total Return GS Index

A GS Index which is calculated on an excess return basis is the excess return version of one or more total return indices. To determine the value of an excess return index, the performance of the total return index is reduced by the return that could be earned on a synthetic cash deposit at a notional interest rate. Thus, the performance of an excess return index will nearly always (where such rates of return are positive) be less than the performance of the equivalent total return index.

A Total Return GS Index may exhibit excess return characteristics

A GS Index which is calculated on a total return basis may include Index Components which are calculated on an excess return basis. In such case even though the GS Index is calculated on a total return basis it will exhibit characteristics of an excess return version.

No assurance can be given that a GS Index will produce "absolute returns"

Alternative investments such as financial instruments linked to a GS Index may often be purchased on the basis of their potential to produce "absolute returns", or returns independent of the overall direction of the relevant markets. However, there can be no assurance that a GS Index will actually be successful at producing consistently positive returns or returns independent of the overall direction of the relevant markets, nor does the Index Sponsor or the issuer of financial instruments linked to a GS Index make any representation or warranty, express or implied, that a GS Index will do so in the future.

The actual weights of Index Components may vary following each rebalancing

The actual weight of each of the Index Components may be different than the assigned weights, and therefore the relative contribution of each Index Component to the value of the GS Index may vary from time to time, depending on the performance of each of the Index Components relative to the other Index Components since such immediately preceding rebalancing. The longer the period between each rebalancing, the greater the

likelihood that there will be a significant variance between the absolute values of the weights of the Index Components, and the GS Index may therefore have an exposure to an Index Component further below or in greater excess of its assigned weight than it would if the period were shorter, which may result in a greater skewing of the absolute nature of the investment positions with respect to the Index Components and increase the overall risk profile of the GS Index.

The negative performance of one or more Index Components in a GS Index may outweigh the positive performance of other Index Components in such GS Index

The value of a GS Index will go up or down depending on the overall performance of each of the Index Components in a GS Index. The negative performance of one or more positively weighted Index Components in a GS Index (and/or the positive performance of one or more negatively weighted Index Components in a GS Index) may outweigh the positive performance of other positively weighted Index Components in a GS Index (and/or the negative performance of one or more negatively weighted Index Components in a GS Index). Even in the case of a positive performance of one or more Index Components in a GS Index, the value of the GS Index as a whole may go down if the performance of the other Index Components is negative to a greater extent.

Index Components assigned a weight of zero will not contribute to the level of the GS Index

Some Index Components may be assigned a weight of zero in respect of a rebalancing day and, in such case, the GS Index shall not have any exposure to such Index Components until the next rebalancing day (if any) on which such Index Components are assigned a non-zero weight. As a result, any changes in the performance of such immediate components will not affect the level of the GS Strategy for the relevant period following such rebalancing day.

A GS Index may provide short exposure to one or more of the Index Components

A GS Index may specify that the weight of an Index Component may be less than zero, i.e., a short position in such Index Component. A short position in an Index Component means that a GS Index will have negative exposure to such Index Component and the value of such GS Index will be negatively affected if the value of such Index Component should increase and positively affected if the value of such Index Component should decrease. Therefore, investors should be aware that an investment linked to a GS Index may decline in value in a period, even if the value of such Index Component increases during that timeframe. Further, given that short positions may create exposure to uncapped losses, increases in the value of such Index Component could result in a decrease in the value of such GS Index that is greater than the weight in respect of such Index Component and may result in the value of the GS Index falling to zero.

Correlation of performances among the Index Components may reduce the performance of a GS Index

Performances of the Index Components of a GS Index may become highly correlated from time to time, including, but not limited to, periods in which there is a substantial decline in a particular sector or asset type represented by the Index Components. High correlation during periods of negative returns among the Index Components may have an adverse effect on the level of a GS Index.

A GS Index may not be a fully diversified portfolio

Diversification is generally considered to reduce the amount of risk associated with generating returns. A GS Index may be concentrated in a particular asset class or sector and there can be no assurance that a GS Index will be sufficiently diversified at any time to reduce or minimize risks of volatility. The more concentrated the GS Index is in certain asset classes or sectors, the greater degree of volatility the GS Index may exhibit, and this could in turn result in an adverse effect on the returns of the GS Index.

In addition, certain asset classes or sectors may suffer the same adverse performance following a general downturn or other economic or political event, and this could in turn have an adverse effect on the returns of the GS Index.

Prices in the relevant underlying indices, financial instruments or assets constituted in an Index Component may be volatile

The value of an Index Component may be derived in whole or in part from the value of certain underlying indices, financial instruments or assets. The prices or levels of such underlying indices, financial instruments or assets may be volatile, with price movements being influenced by a multitude of factors, including, but not limited to,

supply and demand, applicable market conditions, government policies and programs, political and economic events and rates of inflation, currency devaluations and revaluations, and sentiment in the relevant market. This may make the value of an Index Component volatile, which may in turn make the level of a GS Index volatile.

Volatility and GS Index risk

A GS Index may have a daily volatility adjustment feature (if so specified in the Relevant Base Description and/or Relevant General Description), which aims to provide a notional volatility-controlled exposure to the Index Components of such GS Index. This is achieved by periodically increasing or decreasing the exposure of such GS Index to the Index Components, based on the realized volatility of the Index Components over a certain period of time relative to a pre-determined volatility target. An increase in the realized volatility of an Index Component may decrease the exposure of such GS Index to such Index Component.

If the daily volatility adjustment feature is applicable, an underperformance of the GS Index compared to a similar GS Index without such feature could be observed in periods where the value of an Index Component in which a GS Index holds a synthetic long position is increasing and, at the same time, the realized volatility exceeds the volatility target. The daily volatility adjustment feature, if applicable, is not designed for short term investments both in terms of improved participation for option-based payoffs linked to the GS Index and in terms of the performance of the GS Index.

Potential investors should make their own investigations and form their own views as to the appropriateness or otherwise of such GS Index, taking into account their own circumstances. In particular, potential investors in products linked to such GS Index should note that such GS Index may not reflect the return that could be realized from a direct investment in the Index Components.

As some Index Components may not be denominated in the currency of the GS Index, a GS Index may be subject to currency exchange rate risks

Each GS Index is calculated in a particular currency (the "**Index Currency**"). While some of the Index Components may be denominated in the Index Currency, a GS Index may also comprise Index Components denominated in other currencies. A GS Index may therefore be exposed to currency exchange rate risks. The impact on the value of a GS Index will depend on the extent to which these other currencies, if any, strengthen or weaken against the Index Currency and the relative weight of each such other currency represented in the GS Index. Currency exchange rates vary over time. Changes in a particular currency exchange rate result from the interaction of many factors directly or indirectly affecting economic or political conditions, including rates of inflation, interest rate levels, balances of payment among countries, the extent of governmental surpluses or deficits and other financial, economic, military and political factors, among others.

A GS Index may have a limited operating history and may perform in unanticipated ways

A GS Index may be a relatively new strategy. Where limited historical performance data exists with respect to the Index Components referenced by such GS Index and the GS Index itself, any investment in respect of which returns are linked to the performance of a GS Index or its Index Components may involve greater risk than an investment linked to returns generated by an investment strategy with a proven track record. While a longer history of actual performance could provide more reliable information on which to assess the validity of a GS Index and on which to base an investment decision, the fact that a GS Index and the Index Components are relatively new would not allow this. There can be no guarantee or assurance that a GS Index or its Index Components will operate in a manner consistent with the data available.

Index Inception Date and Back-testing

The Index Sponsor will designate an "Index Inception Date", on which the value of the strategy is equal to the "Initial Index Level" as specified in the rules of the relevant GS Index. The levels of the GS Index in the period from such Index Inception Date, to a date (the "**Index Launch Date**") no later than the date on which investment products linked to such GS Index are first implemented (which may be materially later than the Index Inception Date) will be calculated on the basis of back-tested data ("**Back-testing**").

GS Index levels for such period are hypothetical, and are calculated at or around the Index Launch Date in accordance with the relevant GS Index methodology but using historical data available to the Index Sponsor at the time of calculation. If such historical data is not available or is incomplete for any particular day, the Index Sponsor may use alternate sources of data in place of such historical data, and/ or may substitute alternative values (which may be determined by the Index Sponsor), as it deems necessary to calculate such hypothetical level of the GS Index.

If such historical data was available or complete, or if different sources or values were used in such Back-testing, the GS Index levels for such period would be different, potentially materially so. Accordingly, such GS Index levels may not reflect the performance of, and are no guarantee or assurance in respect of the performance or returns of, the GS Index over any time period from the Index Launch Date. Furthermore, any Back-testing is based on information and data provided to the Index Sponsor by third parties. The Index Sponsor will not have independently verified or guaranteed the accuracy and/or the completeness of such information or data provided and is not responsible for any inaccuracy, omission, mistake or error in such information, data and/or back-testing.

Some GS Index parameters are partially based on simulated data

Some parameters of a GS Index may have been determined by reference to simulated time series data which start before the Index Launch Date for such GS Index. Such simulated data are based on various assumptions, do not reflect actual trading and are subject to various market data limitations. As a result, the performance of the simulated time series data may differ from the actual historical performance of a GS Index and this difference may be material. The future performance of a GS Index will depend, among other things, on the choice of the parameters as described in the Relevant General Description and/or Other Relevant Documentation Elements for the relevant GS Index. As such, the performance of such GS Index could be materially different if the relevant parameters were determined based on the actual performance of such GS Index rather than based on simulated time series data.

Gains from an investment linked to a GS Index will be adjusted by deductions included in the calculation of the value of such GS Index

Notional embedded costs may be included within a GS Index and will reduce the level of such GS Index. Such amounts will be deducted from the performance of a GS Index with the intention of reflecting synthetically one or more of (i) the cost of maintaining exposure to, and replicating performance of, each Index Component (the "**Servicing Costs**") (ii) the cost of entering into and/or unwinding transactions relating to an Index Component following each rebalancing of such Index Component in the GS Index (the "**Transaction Costs**") and/or (iii) the index servicing costs (the "**Index Servicing Costs**"). The relevant Servicing Costs and the relevant Transaction Costs for each Index Component will vary depending on the Index Component. Servicing Costs are applicable on an ongoing basis for such time as the GS Index maintains exposure to the Index Component. Deductions to account for Transaction Costs in relation to an Index Component are made only as a result of a rebalancing of such Index Component. The Index Servicing Costs are applicable to the GS Index rather than the Index Components and are applicable on an ongoing basis for such time as the level of the GS Index is greater than zero. These embedded costs will reduce the level of such GS Index.

Notional transaction costs, servicing costs and index servicing costs embedded in a GS Index may be greater than actual costs incurred in hedging transactions of the Index Sponsor or its affiliates

The transaction costs, servicing costs and/or index servicing costs which are embedded and reflected in the calculation of a GS Index will be calculated by reference to pre-determined rates and will not necessarily reflect the actual or realised transaction costs and/or servicing costs that would be incurred by an investor in the relevant Index Components or their underlying constituents, which could be larger or smaller from time to time. The Index Sponsor (or its affiliates) may benefit if the transaction costs, servicing costs and/or index servicing costs embedded in a GS Index exceed the actual transaction costs and/or servicing costs that are incurred by the Index Sponsor (or its affiliates) in hedging transactions that may be entered into in respect of such GS Index, each Index Component and/or any underlying component thereof.

The value of each Index Component and of each underlying component may be adjusted by certain deductions

Each Index Component and the underlying components thereof may also embed notional cost deductions, the effect of which is to reduce the level of the Index Component or component thereof, as applicable. Such notional costs deductions are intended to reflect, synthetically, certain costs incurred in respect of such Index Component (or component thereof, as applicable) which are equivalent in type and nature to the costs described above in respect of a GS Index. Any such deductions from the level or value of an Index Component or underlying component thereof shall have the effect of reducing the level of the relevant GS Index.

Under certain market conditions, the Index Sponsor could significantly increase the costs that are deducted from a GS Index

Under certain market conditions, the Index Sponsor of a GS Index may determine to increase significantly the costs that are deducted from the GS Index, and there may be no fixed limits on the levels of these costs. Although this determination is constrained by the procedure described in the Relevant Base Description and/or

Relevant General Description, it is possible that the increased cost may be significantly greater than the levels originally assigned to them. Further, although a period of such market conditions may last only a short time, the increased cost could be deducted from a GS Index for an extended period of time. This could materially adversely affect the performance and value of a GS Index.

The Index Sponsor's hedging activity may affect the level of a GS Index

By executing products linked to a GS Index ("**Linked Products**"), Goldman Sachs International and/or its affiliates ("**GS**") will have an exposure to such GS Index and its Index Components. GS will take risk positions to hedge this exposure in its sole discretion and in a principal capacity. Investors in any Linked Product will not have any rights in respect of any GS hedge positions, including any shares, futures, options, commodities or currencies. GS may execute its hedging activity by trading in the Index Components of a GS Index on or before the related rebalancing day. Such trading may have an adverse impact on the level at which a basket of Index Components is rebalanced which will result in an adverse impact on the performance of an Index. GS's hedging activity, and hence the size of such impact, will be linked to the amount of new and outstanding Linked Products at the relevant time. Additionally, GS may generate revenues if it executes its hedging activity at different levels from those used to determine the value of a GS Index or on a rebalancing of such GS Index. Such hedging activity could generate significant returns to GS that will not be passed on to investors in Linked Products.

A GS Index and its components are calculated and rebalanced according to the methodology for such GS Index, which includes assumptions as to transaction and servicing costs. GS will generate revenues in relation to a GS Index if the cost that GS incurs through its hedging activities are less than the assumed costs used in the methodology for a GS Index.

Section 871(m) of the U.S. Internal Revenue Code

The United States Treasury Department has issued regulations under which amounts paid or deemed paid on certain financial instruments ("**871(m) financial instruments**") that are treated as attributable to U.S.-source dividends could be treated, in whole or in part depending on the circumstances, as a "dividend equivalent" payment that is subject to tax at a rate of 30 per cent. (or a lower rate under an applicable treaty), which in the case of any amounts or returns which an investor in products linked to a GS Index may receive under the terms of their investment, could be collected via withholding. If these regulations were to apply, the counterparty to, or issuer of, such products may be required to withhold such taxes if any dividends are paid on any underlying component of the GS Index during the term of such investment. Any such investor may also be required to make certifications prior to the maturity of their investment in order to avoid or minimize withholding obligations, and the counterparty or issuer (as applicable) could withhold accordingly (subject to such investor's potential right to claim a refund from the United States Internal Revenue Service) if such certifications are not received or are not satisfactory. These regulations generally apply to any payment made on or after 1 January 2017 with respect to any 871(m) financial instrument issued on or after 1 January 2017. Investors in products linked to a GS Index should consult their tax advisors concerning these regulations or subsequent official guidance and regarding any other possible alternative characterisations of such products for United States federal income tax purposes.

Each GS Index may be subject to Disruption Events

If certain Disruption Events in respect of a GS Index (each as more particularly described in the relevant Index Rules) occur on any Index Business Day (as defined in the relevant Index Rules) or such other day(s) on which the value of such GS Index is scheduled to be calculated or published, the value of a GS Index may not be determined on such scheduled Index Business Day and/or other determinations and/or adjustments may be made in the discretion of the Index Sponsor, and the method of determining such GS Index and/or its value may be changed. In such case, it is likely that the value of such GS Index will be different from what it would have been if such Disruption Events had not occurred, and it may vary unpredictably and could be lower.

The Index Sponsor and/or the Index Calculation have the discretion to make determinations that could materially affect a GS Index and create conflicts of interest

The Index Sponsor and the Index Calculation Agent do not generally exercise any discretion in relation to the operation of a GS Index and owe no fiduciary duties in respect of the GS Indices. The Index Sponsor has a certain amount of discretion in the event of, amongst other things, the occurrence of certain Disruption Events in respect of each GS Index (each as more particularly described in the relevant Index Rules). Determinations made by the Index Sponsor and, if applicable, the Index Calculation Agent could adversely affect the value of a GS Index or any product linked to a GS Index and the exercise by the Index Sponsor of its discretion could present it with a conflict of interest of the kind described in Section E: *Conflicts of Interest*. In making those determinations, the Index Sponsor and/or the Index Calculation Agent will not be required to, and will not, take the interests of any investor of any such product into account or consider the effect its determinations will have on the value of such a product. All determinations made by the Index Sponsor and/or the Index Calculation Agent shall be at its sole discretion and shall be conclusive for all purposes and will bind all investors of any products

linked to a GS Index. The Index Sponsor and/or the Index Calculation Agent shall not have any liability for such determinations.

GSG members may, if it is acting as sponsor of one or more of the Index Components in respect of a GS Index, have the authority to make determinations in respect of such Index Components that could materially affect such GS Index and create conflicts of interest

GSG members may also act as sponsor of one or more of the Index Components in respect of a GS Index. In that capacity, each of them has the power in such capacity to make certain determinations that could materially affect the value of such Index Components and, in turn, the value of such GS Index, and the exercise by each such member of its discretion in its capacity as sponsor of such Index Components could present it with a conflict of interest of the kind described in Section E: *Conflicts of Interest*.

Trading and other transactions by GSG could materially affect the value of any product linked to a GS Index

GSG is a full-service financial services firm engaged in a range of market activities. GSG may issue, arrange for the issue of, or enter into products referenced to, a GS Index and/or the Index Components and arrange for the distribution of these products or underlyings, including the payment of distribution fees and commissions to any intermediaries. These activities could adversely affect the value of a GS Index and/or the value of the Index Components, and may present GSG with a conflict of interest of the kind described in Section E: *Conflicts of Interest*.

Information provided by the Index Sponsor or GSG about the value of any Index Components may not be indicative of future performance

Any information about the performance of any Index Components provided by the Index Sponsor or GSG (as applicable) will be or has been furnished as a matter of information only, and an investor in a product linked to a GS Index should not regard the information as indicative of the range of, or trends in, fluctuations in the levels or values that may occur in the future. Such information will likely differ from the actual values and levels used under the relevant methodology used to calculate such GS Index.

Information about each GS Index may only be available through the Index Sponsor or GSG

The Index Sponsor or GSG (as applicable) may not provide investors of any product linked to a GS Index with further information in relation to such GS Index beyond what is provided in the relevant Index Rules, and further information may not be generally available. The Index Sponsor or GSG (as applicable) has entered into non-exclusive licensing agreements with certain of its third party data suppliers in order to source the necessary data to calculate each GS Index. The formalities necessary to obtain access to such figures may deter potential investors from buying a product linked to a GS Index on the secondary market.

Reliance on the Index Calculation Agent

The Index relies on the Index Calculation Agent to determine the value of the Index, amongst other obligations. If the Index Calculation Agent does not, and/or is unable to, perform its obligations in respect of the Index, the determination and publication of the value of such Index is likely to be materially delayed. In such cases the Index Sponsor will aim to replace the Index Calculation Agent but there is no guarantee that this will be achieved in a reasonable timeframe and the determination and publication of the Index value of such Index may be delayed for a material period of time. This is likely to have an adverse effect on products linked to such Index, including the possible termination of such products.

The Index Sponsor and the Index Calculation Agent may rely upon third party and other external and internal data sources which may be inaccessible and/or inaccurate, and the inputs used by the Index Calculation Agent or the Index Sponsor to run the index calculations may affect the value of such GS Index

The Index Sponsor and the Index Calculation Agent may rely upon third party brokers or external dealers and other external and internal sources to obtain certain inputs necessary to compute the value of each GS Index which may be inaccessible and/or inaccurate and the inputs used by them to determine the weights of the Index Components and/or to compute the value of a GS Index may affect the value of such GS Index. Investors considering acquiring or making an investment in a product linked to such GS Index should carefully read and understand the information about such Index Components. Information about the Index Components can be found on the Bloomberg Pages specified in the Relevant General Description and/or Other Relevant Documentation Elements.

The inability of the Index Calculation Agent to source necessary data to calculate the relevant formulae of each GS Index may affect the value of such GS Index. In addition, the Index Sponsor and the Index Calculation Agent

makes no warranty as to the correctness or completeness of that information and takes no responsibility for the accuracy of such data or the impact of any inaccuracy of such data on the value of each GS Index.

Products linked to a GS Index may be exposed to more or less risk, or perform better or worse, based upon the inputs received from the above suppliers or sources, than an actual investment in or linked to one or more of the Index Component(s).

Sponsors of Index Components have authority to make determinations that could materially affect a GS Index

Determinations that the sponsors of the Index Components of a GS Index, including GSG members, may make in connection with the composition, calculation and maintenance of the Index Components may materially affect the value of the Index Components and could, in turn, adversely affect the value of such GS Index. Those sponsors have no obligation to take the interests of the Index Sponsor or any investors of any investment referenced or linked to a GS Index into consideration for any reason in carrying out their functions and have generally disclaimed all liability to the extent permitted by law.

In addition, the sponsors of the Index Components have licensed, and may continue to license, such Index Components for use by other market participants, for publication in newspapers and periodicals, for distribution by information and data dissemination services and for various other purposes, any of which may contribute to an increased or decreased level of investment in such Index Components, which could adversely affect the value of a GS Index.

The policies of the Index Sponsor and changes that affect a GS Index could affect the value of the GS Index

The decisions and policies of the Index Sponsor concerning the calculation of the value of a GS Index could affect the value of such GS Index and, therefore, the amount payable on any products linked to such GS Index on the stated maturity date of such products (or on any other payment date) and the market value of such products before that date. The amount payable on any products linked to a GS Index 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 such GS Index, or if the Index Sponsor discontinues or suspends calculation or publication of such GS Index, in which case it may become difficult to determine the market value of such products. If such policy changes relating to a GS Index or the calculation or publication of a GS Index is discontinued or suspended, the calculation agent of any products linked to such GS Index (which may be Goldman Sachs International) will have discretion in determining the level of such GS Index on the relevant determination date and the amount payable on such products.

The policies of a sponsor and changes affecting an Index Component could affect the GS Index and its value

The policies of a sponsor concerning the calculation of the value of an Index Component, or additions, deletions or substitutions of Index Components and the manner in which changes affecting the Index Components could affect the value of an Index Component and, therefore, the value of such GS Index and any product linked to such GS Index. The value of a GS Index could also be affected if the relevant sponsor changes these policies, for example, by changing the manner in which it calculates the value of the Index Component, or if the sponsor discontinues or suspends calculation or publication of the value of the Index Component, in which case it may become difficult to determine the value of the GS Index.

A GS Index may be calculated without reference to corrected data

In the event that the value of any component which is used for the calculation of the weight of any Index Component in relation to the GS Index is corrected after such time as it is used in the GS Index, the Index Calculation Agent shall be under no obligation to use such corrected value and may use the weights as calculated before such correction. As a result the performance of a GS Index may differ from the performance had such corrected values been used, and possibly materially so.

A GS Index may be changed or become unavailable

The Index Sponsor shall have the right to alter the methodology used to calculate a GS Index or to discontinue publication of the value of such GS Index and such event may result in a decrease in the value of or return on any product linked to such GS Index.

The Index Sponsor reserves the right to form an Index Committee for the purposes of considering certain changes. Any changes may be made without regard to the interests of an investor of any product linked to such GS Index.

If a GS Index uses an optimisation computer software package then such package may not determine the mathematically optimal result, and may be changed from time to time.

As part of its pre-determined set of rules a GS Index may use a commercially available optimisation computer software package (an "**Optimiser**") to solve a mathematical optimisation problem, which may be subject to certain optimisation constraints. For example, if specified in the rules of a GS Index such GS Index may use an Optimiser to calculate the weights of certain Index Components with the aim of maximising or minimising one or more variables.

As the possible results may be a continuous function, there may be no simple function to test the various combinations of results. Consequently, it is necessary to use approximations contained in computation routines. There is no guarantee that in respect of any optimisation problem an Optimiser will determine the optimal set of results and it is possible that there exist alternative results that satisfy the relevant constraints. Further, the Index Calculation Agent may from time to time change the Optimiser used in respect of a GS Index. Different Optimisers may be more or less likely to determine the optimal result for a GS Index, and using them could lead to a different performance of a GS Index. If such GS Index employed a different Optimiser, the results of rebalancing could be different and possibly materially so. As such, the performance of the GS Index may be dependent on the choice of Optimiser and could be materially different if the Index Sponsor replaces the Optimiser at any time.

Risk factors relating to Index Components which reference foreign exchange rates

Changes in foreign currency exchange rates can be volatile and unpredictable

Generally, rates of exchange between foreign currencies are volatile, and this volatility may continue in the future, in particular with regard to emerging market currencies. Fluctuations in currency exchange rates could adversely affect the performance of the GS Index. Some markets, especially emerging markets, carry significant risks for investors.

Government policy can adversely affect foreign currency exchange rates

Foreign currency exchange rates can either float or be fixed by sovereign governments. From time to time, governments use a variety of techniques, such as intervention by a country's central bank or imposition of regulatory controls or taxes, to affect the exchange rate of their currencies. Governments may also issue a new currency to replace an existing currency or alter the exchange rate or exchange characteristics by devaluation or revaluation of a currency. Therefore, the level of an Index Component (and therefore any GS Index referencing such Index Component) which references foreign currency exchange rates could be significantly and unpredictably affected by governmental actions. Even in the absence of governmental action directly affecting foreign currency exchange rates, political, military or economic developments in a country issuing either currency of a releveant currency pair or elsewhere could lead to significant and sudden changes in the foreign currency exchange rate between currency pairs as well as the level of any Index Component referencing such foreign currency exchange rate taken into account for the purposes of the calculation of the level of the GS Index.

The government or central bank that issues either currency of a relevant currency pair will have no involvement in the offer and sale of the GS Index and no obligations to the Index Sponsor. Each such government or central bank may take actions that could adversely affect the value of the GS Index.

Foreign exchange rates are influenced by unpredictable factors

Generally, foreign exchange rates are a result of the supply of, and demand for, a given currency both domestically and internationally. Changes in exchange rates may result from the interactions of many factors including economic, financial, social and political conditions in Europe, the United States, any other jurisdiction whose currency is either currency of a relevant currency pair. These conditions include, for example, the overall growth and performance of the economies of the United States, the European Monetary Union (and the constituent nations thereof), any other jurisdiction whose currency is either currency of the relevant currency pair, the trade and current account balance between such countries, inflation, interest rate levels, the performance of global stock markets, the stability of the United States, European or other relevant jurisdictions' governments and banking systems, wars in which such nations or regions are directly or indirectly involved or that occur anywhere in the world, major natural disasters, and other foreseeable and unforeseeable events.

Certain relevant information relating to relevant jurisdictions (in respect of any currency pair) may not be as well known or as rapidly or thoroughly reported in the United States as compared to US developments. It is possible that there would be a lack of availability of important information that can affect the value of the one currency against another in respect of the GS Index, and special efforts may be required to obtain such information on a timely basis. See also the risk factor entitled "Government policy can adversely affect foreign currency exchange rates" above.

Foreign exchange rate information may not be readily available

There is no systematic reporting of last-sale information for foreign currencies. Reasonable current bid and offer information is available in certain brokers' offices, in bank foreign currency trading offices, and to others who wish to subscribe for this information, but this information will not necessarily reflect the currency exchange rates relevant for determining the level of the GS Index. The absence of last-sale information and the limited availability of quotations to individual investors may make it difficult for many investors to obtain timely, accurate data about the state of the underlying foreign exchange markets.