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LINKED TO THE STRATEGY. THE STRATEGY SPONSOR HAS NO OBLIGATION TO TAKE THE INTERESTS OF ANY PERSON INTO CONSIDERATION IN STRUCTURING THE STRATEGY, CALCULATING THE VALUE OF THE STRATEGY OR MAKING DETERMINATIONS RELATING TO THE STRATEGY, AS THE CASE MAY BE. THE STRATEGY SPONSOR 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 THE STRATEGY OR ANY COMPONENT THEREOF) AS A RESULT OF EXERCISING ITS DISCRETION IN RESPECT OF THE STRATEGY.

GOLDMAN SACHS INTERNATIONAL, AS 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.

TRANSITION MATERIALS INDEX

SPECIFICATIONS ANNEX

Dated: 11 December 2024

Overview

This overview of the Strategy is a summary and, as such, is necessarily incomplete. This overview should be read in conjunction with, and is qualified in its entirety by, the more detailed descriptions in the various documents described in this overview.

The Transition Materials Index (the “**Strategy**”) is a synthetic rules-based strategy administered by Goldman Sachs International as strategy sponsor (the “**Strategy Sponsor**”) and managed by Lombard Odier Asset Management (Switzerland) SA (“**LOIM**”) acting as strategy allocator (the “**Strategy Allocator**”). It is the intention of the Strategy Sponsor that each Strategy shall not constitute a “benchmark” for the purpose of (i) the regulation on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) 596/2014 ((EU) 2016/1011) (the “Benchmark Regulation”) or (ii) the Benchmark Regulation as it forms part of “retained law” in the United Kingdom as defined in the European Union (Withdrawal) Act 2018 (as amended from time to time).

The Strategy intends to provide a synthetic exposure to the performance of a basket (the “**Basket**”) of underlying components (the “**Components**”), weighted by their relevant quantities (the “**Component Quantities**”).

The Strategy reflects the performance of a portfolio of transferable securities which:

- (i) may be rebalanced from time to time by LOIM in its capacity as strategy allocator of the Strategy (“**the Strategy Allocator**” in the Strategy Description shall be construed accordingly);
- (ii) has synthetic servicing costs which are deducted on a daily basis from the value of the Strategy; and
- (iii) has embedded synthetic transaction costs charged for changes in the quantity assigned to certain Components which may increase or decrease the Strategy Value, depending on whether these are positive or negative.

The Strategy Value can be positive or may fall below zero and have a negative value. The Strategy Value is denominated in United States dollars (“**USD**”).

The value of the Strategy is computed net of costs, when applicable, in respect of synthetic transactions and positions, as further specified in the parameters of the Transaction Modules applicable to the Strategy. Investors should note that the actual costs (including in respect of any applicable tax) of entering into, unwinding and/or maintaining such transactions may be lower or higher than the synthetic costs set out in the Strategy and, if they were lower, the effect of these deductions would be to benefit the Strategy Sponsor and/or any affiliate (a “**Hedging Party**”) in its capacity as issuer of, or counterparty to, products linked to the Strategy (such products, “**Linked Products**”).

A Hedging Party may hedge its exposure or potential or expected exposure to the Strategy (and other similar strategies), Linked Products, and the Components with an affiliate or a third party. Any returns on a Hedging Party’s hedging activity or on any unhedged exposure will not be passed on to investors in any Linked Products, and investors in any Linked Product will not have any rights in respect of a Hedging Party’s hedge positions, including any shares, exchange-traded funds, futures, options, commodities or currencies. Where a Hedging Party, in accordance with its internal policies, executes hedging activity by trading in Components of the Strategy (or other similar strategies), such trading may have an adverse impact on the level at which the Strategy is rebalanced (which may result in an adverse impact on the performance of the Strategy). Such hedging activity, and the size of such impact, will be linked to the amount of new and outstanding Linked Products at the relevant time and then-prevailing market conditions.

The Strategy is initially calculated and published by Goldman Sachs International as the “**Strategy Calculation Agent**” and may thereafter be such person as the Strategy Sponsor may appoint from time to time. The Strategy Sponsor does

not have any obligation to ensure that the Strategy Calculation Agent continues to publish the value of a Strategy and the Strategy Calculation Agent may discontinue publication at any time.

Where Goldman Sachs International is required or entitled to make a determination in relation to the Strategy pursuant to the Strategy methodology and that determination involves the exercise of expert judgement or discretion (other than those that are purely mechanical and, where relevant, implemented in accordance with the relevant methodology), then that expert judgement or discretion, unless stated otherwise in the Strategy Description, will be exercised in good faith and in a commercially reasonable manner and will be subject to Goldman Sachs International's policies and procedures.

Documentation

The rules and methodology applicable to the Strategy and other information relating to it (the “**Strategy Description**”) are set out in the following documents:

- (i) The Specifications Annex dated 11 December 2024 (as amended, updated and/or supplemented from time to time) which describes the parameters which apply to this specific Strategy and which are used to effect the calculations described in the General Description and the Strategy Methodology (the “**Specifications Annex**”);
- (ii) The Transition Materials Index Methodology dated 11 December 2024 (as amended, updated and/or supplemented from time to time) which sets out the methodology of the relevant Transaction Modules (the “**Strategy Methodology**”);
- (iii) The Goldman Sachs Transaction-Based Basket Strategies in effect at the date of this Specifications Annex (as amended, updated and/or supplemented from time to time) which sets out the general rules of the Strategy, including the methodology used to calculate the value of the Strategy (the “**General Description**”);
- (iv) The Goldman Sachs General Strategy Terms in effect at the date of this Specifications Annex (as amended, updated and/or supplemented from time to time, and a copy of which is available at this [link](#)¹) which contain general matters related to several strategies of this type, such as general adjustments, publication and changes in methodology, the adjustments that may be made if disruption events and other events occur and important risk factors and disclaimers (the “**General Strategy Terms**”); and
- (v) Each of the documents describing the Components (if any).

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 Specifications Annex shall prevail over all other documentation elements).

INVESTORS IN ANY LINKED PRODUCT SHOULD READ AND UNDERSTAND THIS SPECIFICATIONS ANNEX AND OTHER DOCUMENTATION ELEMENTS OF THE STRATEGY DESCRIPTION AND EACH OF THE DOCUMENTS DESCRIBING THE COMPONENTS IN THE STRATEGY (IF ANY).

IN PARTICULAR INVESTORS SHOULD NOTE THE SECTION OF THE STRATEGY DESCRIPTION HEADED “RISK FACTORS” (INCLUDING THE “ADDITIONAL RISK FACTORS” BELOW), “CONFLICTS OF INTEREST” AND “DISCLAIMERS” AND THE RISK FACTORS IN THE DOCUMENTS DESCRIBING EACH OF THE COMPONENTS IN THE STRATEGY (IF ANY) PRIOR TO MAKING ANY INVESTMENT DECISION.

ADDITIONAL RISK FACTORS

A Proposed Parameter Adjustment will not be implemented if the Live Price in respect of the Live Immediate Component is not agreed by the prescribed cut-off time

The implementation of a Proposed Parameter Adjustment is contingent on the Strategy Sponsor and Strategy Allocator agreeing Live Prices in respect of the Live Immediate Component. If any such Live Price cannot be agreed on or prior to the prescribed cut-off time on the relevant Live Price Agreement Day, the Strategy Sponsor will not implement the relevant Proposed Parameter Adjustment. As such, any such failure to agree a Live Price (and, therefore, failure to implement a Proposed Parameter Adjustment) may have a negative impact on the Strategy Value (potentially materially so). There is no guarantee that the Strategy will outperform other strategies that use any such alternative methodology for the determination of synthetic transaction prices in respect of components and may underperform in comparison to such other strategies, potentially materially so.

A Proposed Parameter Adjustment may be rejected by the Strategy Sponsor to enable the Strategy Sponsor and/or any affiliate to be able to effectively hedge its exposure an Immediate Component and reduce the impact

¹ <https://www.goldmansachs.com/what-we-do/FICC-and-equities/products-and-business-groups/products/index-methodologies-docs/gs-general-strategy-terms.pdf>

of such hedging transactions on the relevant markets

If the Strategy Sponsor determines that the aggregate notional amount of products or transactions linked to an Immediate Component or its components, or any other strategy or index of which such Immediate Component is a constituent, exceeds a certain threshold as determined by the Strategy Sponsor by reference to the ability and capacity of the Strategy Sponsor and/or any affiliate to effectively hedge its exposure to such Immediate Component and the liquidity impact of such hedging on the relevant markets), the Strategy Sponsor may reject any relevant Proposed Parameter Adjustment if the implementation of such Proposed Parameter Adjustment would result in a change in the Component Quantity of such Immediate Component (a “**Proposed Parameter Adjustment Rejection**”). Any such Proposed Parameter Adjustment Rejection shall be effective notwithstanding that all Adjustment Conditions in connection with such Proposed Parameter Adjustment may be satisfied. The Strategy Sponsor is not required to take the interests of any person into account in rejecting any Proposed Parameter Adjustment.

The Component Quantity in respect of the Live Immediate Component may be adjusted by the Strategy Sponsor in its sole and absolute discretion in certain circumstances

Upon the occurrence of (i) the ability of the Strategy Sponsor or any of its affiliates to hedge its exposure in respect of related to the Live Immediate Component being disrupted or (ii) certain communications either (A) in relation to publicly available interpretation or guidance of law or regulation or (B) to the Strategy Sponsor or any of its affiliates containing specific instructions or requirements in respect of its hedge positions, in each case, in respect of the Live Immediate Component (each a “**Trigger Event**”), the Strategy Sponsor may, in its sole discretion, make certain adjustments to the Component Quantity in respect of the Live Immediate Component. If the Strategy Sponsor makes any such adjustment, it is likely that the Strategy Value will be different from what it would have been if such Trigger Event had not occurred, and it may vary unpredictably and could be lower.

TRANSACTION MODULES

The Strategy uses Transaction Modules to generate Transactions. The full description of the algorithm by which a Transaction Module generates Transactions is provided in the Strategy Methodology. Each Transaction Module used by the Strategy is listed below.

Transaction Module Execution Order Number	Name	Applicable Modules
1	Active Management	Active Management
2	Non-Tradable Events - Standard	Non-Tradable Events - Standard
3	Transaction Cost - Standard	Transaction Cost - Standard
4	Servicing Cost - Standard	Servicing Cost - Standard

1. General Parameters

Strategy Name	Transition Materials Index
Strategy Calculation Agent	Goldman Sachs International
Strategy Currency	USD
Strategy Bloomberg Ticker	ABGSLOTM Index
Strategy Value Publication Precision	2 decimal places with 0.005 rounded upwards
Strategy Publication Data Source	https://marquee.gs.com/studio or any successor page
Strategy Inception Date	8 July 2022
Strategy Live Date	31 March 2023
Strategy Initial Value	100.00
Strategy Value Floor	Not Applicable
Strategy Return Type	Excess Return
Component Timely Value Floor	Not applicable in respect of all Components.
Strategy Calculation Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Strategy Trading Day	Each calendar day which satisfies each of the following criteria: (i) Strategy Calculation Day, and (ii) Component Trading Day in respect of all Immediate Components which have a non-zero Component Quantity on such calendar day.
Component Business Day	In respect of: <ul style="list-style-type: none"> (i) a Non-Cash Component, each day which is a business day according to the holiday calendar of such Non-Cash Component, as determined by the Strategy Calculation Agent in accordance with the terms and conditions of such Non-Cash Component; and (ii) a Cash Component, each Strategy Calculation Day.
Component Trading Day	<ul style="list-style-type: none"> (i) In respect of a Non-Cash Component: as defined in the Immediate Components Table – Component Trading Day (ii) In respect of a Cash Component: a Component Business Day.
Component Timely Value Convention	In respect of a Component and a Strategy Calculation Day which is not a Component Business Day for such Component, the Component Timely Value shall be the Component Timely Value of such Component as of the immediately preceding Component Business Day.

2. Parameters for Transaction Module – Active Management

Strategy Allocator	LOIM
Rebalancing Instruction Type	Proposed Target Weights
Adjustment Conditions	<p>Each Proposed Parameter Adjustment by the Strategy Allocator shall comply with the following conditions:</p> <ol style="list-style-type: none"> 1. The notification of such Proposed Parameter Adjustment by the Strategy Allocator to the Strategy Sponsor and the Strategy Calculation Agent (an “Adjustment Notification”) shall be substantially in the form separately agreed in writing between the Strategy Sponsor and the Strategy Allocator and shall be delivered in accordance with the Notification Procedure. 2. Previous Proposed Parameter Adjustments specified in Adjustment Notifications have been implemented in full by the Strategy Sponsor prior to the Strategy Allocator submitting any subsequent Adjustment Notifications. 3. The Proposed Parameter Adjustment shall satisfy the Allocation Constraints. 4. The Proposed Parameter Adjustment Day specified in the related Adjustment Notification is a Strategy Calculation Day 5. The related Adjustment Notification is delivered by the Strategy Allocator to the Strategy Sponsor and the Strategy Calculation Agent in accordance with the Notification Procedure (a) no later than 10:15am New York time on the Proposed Parameter Adjustment Day and (b) no earlier than the fourth Strategy Calculation Day immediately preceding the Proposed Parameter Adjustment Day. 6. In respect of the Proposed Parameter Adjustment Day, the Strategy Value in respect of the Relevant Day (as defined in the Strategy Methodology) in respect of such Proposed Parameter Adjustment is strictly greater than zero.
Execution Conditions	<p>In respect of a Proposed Parameter Adjustment, each of the following:</p> <ol style="list-style-type: none"> (i) no rejection of the Proposed Parameter Adjustment by the Strategy Sponsor has occurred on the grounds of a Disruption Event; (ii) no rejection of the Proposed Parameter Adjustment by the Strategy Sponsor has occurred on the grounds that the Strategy Sponsor determines that its ability or that of any affiliate to acquire, establish re-establish, substitute maintain, unwind or dispose of any transaction(s) or asset(s) it deems necessary to hedge its exposure to any relevant Non-Cash Component and/or the available liquidity in respect of such hedging activity on the applicable markets, is materially worsened (including but not limited to incurring materially increased cost) as compared to circumstances existing on the Strategy Inception Date; and (iii) no rejection of the Proposed Parameter Adjustment by the Strategy Sponsor has occurred on the grounds that the aggregate notional amount of products or transactions linked to an Immediate Component or its components, or any other strategy or index of which such Immediate Component is a constituent, exceeds a certain threshold (as determined by the Strategy Sponsor by reference to the ability and capacity of the Strategy Sponsor and/or any affiliate to effectively hedge its exposure to such Immediate Component and the liquidity impact of such hedging on the relevant markets), and such Proposed Parameter Adjustment would, if implemented, change the Component Quantity of such Immediate Component.

Weights Rounding Convention	2 decimal places with 0.005% being rounded upwards
Strategy Transaction Time Stamp	The end of the relevant Strategy Calculation Day
Observation Day	In respect of the Strategy and a Proposed Parameter Adjustment, 1 Strategy Calculation Day immediately preceding the Proposed Parameter Adjustment Day
Parameter Adjustment Day	In respect of a Proposed Parameter Adjustment, the Proposed Parameter Adjustment Day

Parameters in respect of the Allocation Constraints

Allocation Constraints	Each Proposed Parameter Adjustment by the Strategy Allocator shall comply with the following conditions: <ol style="list-style-type: none">1. In respect of each Immediate Component, the Proposed Target Weight shall be larger or equal to the Minimum Proposed Target Weight and smaller or equal to the Maximum Proposed Target Weight as specified in the Immediate Components Table;2. The sum of the Proposed Target Weights across all Immediate Components shall be equal to 100%
Adjustments to a Component Quantity	The Strategy Sponsor shall have the right, in its sole discretion, on any Strategy Calculation Day to make an adjustment to the Component Quantity in respect of the Live Immediate Component upon the occurrence of a Trigger Event in respect of the Live Immediate Component. Any such adjustment to a Component Quantity in respect of the Live Immediate Component by the Strategy Sponsor in accordance with the foregoing shall be made in good faith and a commercially reasonable manner by reference to all available market information at the relevant time.
Trigger Event	Each of: <ol style="list-style-type: none">(i) the Strategy Sponsor determines that its ability or that of any affiliate to acquire, establish re-establish, substitute maintain, unwind or dispose of any transaction(s) or asset(s) it deems necessary to hedge its exposure to the Live Immediate Component and/or the available liquidity in respect of such hedging activity on the applicable markets, is materially worsened (including but not limited to incurring materially increased cost) as compared to circumstances existing on the Strategy Inception Date; or(ii) a communication (i) of new or previously not publicly available interpretation or guidance of law or regulation applicable to the Live Immediate Component, or (ii) to the Strategy Sponsor or any of its affiliates of any explicit requirement, instruction or direction with respect to any relevant hedge position in respect of the Live Immediate Component, by a court, tribunal, government or regulatory authority (including a taxing authority) or an official or representative of any such authorities.

3. Parameters for Transaction Module – Non-Tradeable Events

Non-Tradable Applicability	Events In respect of a Transaction Component, Applicable: Postpone Next Day
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Immediate Components Table

The Immediate Components of the Strategy are as set out in the table below. For more information on each such Immediate Component please refer to the relevant description in respect of such Immediate Component.

Immediate Component	Component Bloomberg Ticker	Component Currency	Style	Component Servicing Cost Rate	Component Transaction Cost Rate	Execution Lag	Minimum Proposed Target Weight	Maximum Proposed Target Weight	Transaction Price	Non-Tradable Events Applicability
Goldman Sachs Zinc Rolling Excess Return Index	AGGSIZ11	USD	Index	0.16%	0.02%	0	0%	20%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Aluminium Rolling Excess Return Index	AGGSIA11	USD	Index	0.14%	0.02%	0	0%	20%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Copper Rolling Excess Return Index	AGGSIC11	USD	Index	0.14%	0.02%	0	0%	20%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Lead Rolling Excess Return Index	AGGSIL11	USD	Index	0.16%	0.02%	0	0%	15%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Nickel Rolling Excess Return Index	AGGSIN11	USD	Index	0.16%	0.03%	0	0%	15%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Gold Rolling Excess Return Index	AGGSGC11	USD	Index	0.16%	0.02%	0	0%	20%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Silver Rolling Excess Return Index	AGGSSI11	USD	Index	0.16%	0.02%	0	0%	15%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Palladium Rolling Excess Return Index	AGGSPA11	USD	Index	0.40%	0.05%	0	0%	10%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Platinum Rolling Excess Return Index	AGGSPL11	USD	Index	0.24%	0.03%	0	0%	10%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Ethanol Rolling Excess Return Index	AGGETHE	USD	Index	1.50%	0.15%	0	0%	5%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Tin Rolling Excess Return Index	AGGSIS11	USD	Index	0.25%	0.05%	0	0%	5%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Lumber Rolling Excess Return Index	AGGSLUME	USD	Index	1.00%	0.10%	0	0%	5%	Component Timely Value	Applicable: Postpone Next Day
Goldman Sachs Steel Scrap Rolling Excess Return Index	AGGSSSSE	USD	Index	0.10%	0.00%	0	0%	2%	Live Price	Applicable: Postpone Next Day
Goldman Sachs Cobalt Rolling Excess Return Index	AGGSCOB	USD	Index	0.10%	0.00%	0	0%	2%	Live Price	Applicable: Postpone Next Day

Goldman Sachs Hot Rolled Coil Steel Rolling Excess Return Index	AGGSHRCE	USD	Index	0.10%	0.00%	0	0%	0% (*)	Live Price	Applicable: Postpone Next Day
Goldman Sachs Hot Rolled Coil Steel Quarterly Rolling Excess Return Index (**)	AGGSHRC2	USD	Index	0.10%	0.00%	0	0%	2%	Live Price	Applicable: Postpone Next Day
Goldman Sachs Lithium Rolling Excess Return Index (***)	AGGSLITE	USD	Index	0.10%	0.00%	0	0%	2%	Live Price	Applicable: Postpone Next Day

(*) The Maximum Proposed Target Weight Constraint was set at 2% from (and including) the Strategy Inception Date to (and excluding) 26 June 2023.

(**) The Goldman Sachs Hot Rolled Coil Steel Quarterly Rolling Excess Return Index is only included as an Immediate Component of the Strategy from and including 26 June 2023.

(***) The Goldman Sachs Lithium Rolling Excess Return Index is only included as an Immediate Component of the Strategy from and including 16 October 2023.

Immediate Components Table – Component Trading Day

Immediate Component	Component Trading Day
Goldman Sachs Zinc Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Aluminium Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Copper Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Lead Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Nickel Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Gold Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Silver Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Palladium Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Platinum Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Ethanol Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Tin Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Lumber Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Steel Scrap Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Cobalt Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Hot Rolled Coil Steel Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Hot Rolled Coil Steel Quarterly Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).
Goldman Sachs Lithium Rolling Excess Return Index	Each "Strategy Trading Day" in respect of the Asset (such "Strategy Trading Day" as defined in the strategy description applicable to the Asset).

Calculation of Live Prices for the Live Immediate Component

Live Immediate Component	<ol style="list-style-type: none"> 1. Goldman Sachs Steel Scrap Rolling Excess Return Index 2. Goldman Sachs Cobalt Rolling Excess Return Index 3. Goldman Sachs Hot Rolled Coil Steel Rolling Excess Return Index 4. Goldman Sachs Hot Rolled Coil Steel Quarterly Rolling Excess Return Index 5. Goldman Sachs Lithium Rolling Excess Return Index
Live Price Agreement Day	<p>In respect of a Proposed Parameter Adjustment and if the relevant Adjustment Notification is received:</p> <ol style="list-style-type: none"> (i) prior to the Proposed Parameter Adjustment Day, the Strategy Calculation Day immediately preceding the Proposed Parameter Adjustment Day; and (ii) on the Proposed Parameter Adjustment Day, such Proposed Parameter Adjustment Day; <p>in each case, in respect of such Proposed Parameter Adjustment</p>
Live Price Agreement	<p>On the Live Price Agreement Day in respect of a Proposed Parameter Adjustment, the Live Immediate Component, the Strategy Sponsor and Strategy Allocator shall discuss in good faith the live price (the “Live Price”) that should apply in respect of the Live Immediate Component and such Proposed Parameter Adjustment. If the Strategy Sponsor and relevant Strategy Allocator have agreed to the relevant Live Price on or prior to the Live Price Cut-off Time on such Live Price Agreement Day, then Live Price Agreement shall be deemed to be “Applicable” in respect of the Live Immediate Component.</p> <p>If the Strategy Sponsor and relevant Strategy Allocator have not agreed a Live Price in respect of the Live Immediate Component on or prior to the Live Price Cut-off Time on such Live Price Agreement Day, then Live Price Agreement shall be deemed to be “Not Applicable” in respect of the Live Immediate Component and no Transaction Price shall apply in respect of the Live Immediate Component and Proposed Parameter Adjustment.</p>
Live Price Cut-off Time	3:00 PM (London time)
Preliminary Component Transaction Quantity	<p>In respect of a Proposed Parameter Adjustment and an Immediate Component:</p> <ol style="list-style-type: none"> (i) If the Live Price Agreement is Applicable, then Preliminary Component Transaction Quantity in respect of such Immediate Component shall be as defined in the Strategy Methodology; and (ii) If the Live Price Agreement is Not Applicable, then the Preliminary Component Transaction Quantity in respect of such Immediate Component shall remain the same as the Preliminary Component Transaction Quantity in respect of such Immediate Component on the Strategy Calculation Day immediately preceding the relevant Proposed Parameter Adjustment.

TRANSITION MATERIALS INDEX METHODOLOGY

Dated: 11 December 2024

This documentation element, the Transition Materials Index Methodology, as may be amended from time to time (this "**Strategy Methodology** ") comprises certain rules, methodology, definitions and other information applicable to certain notional rules-based strategies (each, a "**Strategy**").

The Strategy Methodology may be amended or modified from time to time 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.

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Section A: Transaction Modules

1. Transaction Module - Non-Tradable Events – Standard

Module Description: The purpose is to amend, postpone or cancel Non-Tradable Transactions in respect of Components for which this Transaction Module is specified to be applicable.

Transaction Component: In respect of the relevant Transaction Module Execution Day and Transaction Module Execution Time Stamp, each Component in respect of which the Non-Tradable Events Applicability is specified to be "Applicable" in the relevant Specifications Annex and in respect of a which a Non-Tradable Transaction has occurred.

Transaction Module Quantity Type	Additive
Transaction Module Cash Type	Value Effective
Transaction Module Execution Day	As defined in the Strategy Description, and if not so specified each Strategy Calculation Day
Transaction Module Execution Time Stamp	The end of the relevant Strategy Calculation Day
Preliminary Component Transaction Quantity	The Transaction Quantity of the Non-Tradable Transaction
Strategy Transaction Time Stamp	As defined for the Non-Tradable Transaction

Amendment, Postponement or Cancellation of a Non-Tradable Transaction: In respect of a Non-Tradable Transaction on a Transaction Module Execution Day, this Transaction Module shall amend, postpone or cancel Non-Tradable Transactions as follows:

- (i) If "Non-Tradable Events Applicability" is specified in the relevant Specifications Annex in respect of a Transaction Component to be:
 - a) "Applicable: Postpone Next Day" then the execution of the Non-Tradable Transaction shall be postponed to the immediately following Execution Day. Such postponed Transaction shall be executed before any other Transactions, if any, which are generated by any Transaction Module other than this Non-Tradable Events – Standard Transaction Module and which are scheduled for the same Strategy Transaction Time Stamp on the immediately following Execution Day; or
 - b) "Applicable: Postpone Next Time Stamp" then the execution of the Non-Tradable Transaction shall be postponed to the immediately following Strategy Transaction Time Stamp. If there are no further Strategy Transaction Time Stamps scheduled in respect of such Transaction Module Execution Day then the execution of the Non-Tradable Transaction shall be postponed to the first Strategy Transaction Time Stamp on the immediately following Execution Day. Such postponed Transaction shall be executed before any other Transactions, if any, which are 1) generated by any Transaction Module other than this Non-Tradable Events – Standard Transaction Module and 2) scheduled for the same postponed Strategy Transaction Time Stamp; or
 - c) "Applicable: Cancel" then the Non-Tradable Transaction shall be cancelled and no replacement of such Non-Tradable Transaction shall take place,

each in respect of the Transaction Component of the Non-Tradable Transaction.

If the Non-Tradable Transaction is a Value Neutral Transaction then also the Offsetting Cash Transaction associated with such Non-Tradable Transaction shall be postponed or cancelled (as applicable) in a similar manner as the Non-Tradable Transaction, in accordance with the provisions of the above clauses a), b) and c), as applicable.

- (ii) If "Non-Tradable Events Applicability" is specified in the relevant Specifications Annex in respect of a Transaction Component to be "Not applicable" or if not so specified then this Transaction Module shall not make any amendments, postponement or cancellation to the relevant Non-Tradable Transaction.

2. Transaction Module - Transaction Cost – Standard

Module Description: The purpose of this Transaction Module is to charge synthetic transaction costs for changes in the Component Quantities of Non-Cash Components held in the Strategy.

Transaction Component: The Strategy Currency Cash Component.

Preliminary Component Transaction Quantity: In respect of the relevant Transaction Module Execution Day and the relevant Transaction Module Execution Time Stamp:

$$\sum_i -1 \times A_{i,t} \times |(q_{i,t} - q_{i,t-1})| \times CTC_{i,t} \times TCSF_{i,t} \times FX_{i,t}$$

Where:

Subscript i refers to each Non-Cash Component contained in the Strategy on (i) the relevant Transaction Module Execution Day and/or (ii) the Transaction Module Execution Day immediately preceding such relevant Transaction Module Execution Day;

Subscript t refers to the relevant Transaction Module Execution Day;

Subscript $t - 1$ refers to the Transaction Module Execution Day immediately preceding the relevant Transaction Module Execution Day;

$A_{i,date}$ is the Component Timely Value of Component $_{(i)}$ on date $_{(date)}$;

$q_{i,date}$ is the Component Quantity of Component $_{(i)}$ on date $_{(date)}$;

$CTC_{i,date}$ is the Component Transaction Cost Rate of Component $_{(i)}$ on date $_{(date)}$;

$TCSF_{i,date}$ means the Transaction Cost Scaling Factor of Component $_{(i)}$ on date $_{(date)}$, or if not so specified in the Strategy Description, one (1);

$FX_{i,date}$ is the applicable Currency Exchange Rate to convert one unit of the Component Currency of Component $_{(i)}$ into the Strategy Currency in respect of date $_{(date)}$.

Transaction Module Quantity Type	Additive
Transaction Module Cash Type	Value Effective
Transaction Module Execution Day	As defined in the Strategy Description, and if not so specified each Strategy Calculation Day
Transaction Module Execution Time Stamp	The end of the relevant Strategy Calculation Day

3. Transaction Module - Servicing Cost – Standard

Module Description: The purpose of this Transaction Module is, for each Non-Cash Component where a non-zero Component Servicing Cost Rate is specified, to decrease (or increase) the Strategy Value by decreasing (or increasing) the Component Quantity of the Strategy Currency Cash Component. In particular, this Transaction Module will have the effect of reducing the Strategy Value in respect of Components which have a positive Component Servicing Cost Rate.

Transaction Component: The Strategy Currency Cash Component.

Preliminary Component Transaction Quantity: In respect of the relevant Transaction Module Execution Day and the relevant Transaction Module Execution Time Stamp:

$$\sum_i -1 \times A_{i,t-1} \times |q_{i,t-1}| \times CSC_{i,t-1} \times SCSF_{i,t-1} \times DCF_{t-1,t} \times FX_{i,t}$$

Where:

Subscript *i* refers to each Non-Cash Component contained in the Strategy on the Transaction Module Execution Day immediately preceding the relevant Transaction Module Execution Day;

Subscript *t* refers to the relevant Transaction Module Execution Day

Subscript *t – 1* refers to the Transaction Module Execution Day immediately preceding the relevant Transaction Module Execution Day;

A_{i,date} is the Component Timely Value of Component_(i) on date_(date);

q_{i,date} is the Component Quantity of Component_(i) on date_(date); and

CSC_{i,date} is the Component Servicing Cost Rate of Component_(i) on date_(date);

SCSF_{i,date} means the Servicing Cost Scaling Factor of Component_(i) on date_(date), or if not so specified in the Strategy Description, one (1);

DCF_{t-1,t} is the day count fraction for the period from (and including) date (*t – 1*) to (but excluding) date (*t*), computed by using the “**Servicing Cost Day Count Fraction Convention**”. Unless a different Servicing Cost Day Count Fraction Convention is specified in the relevant Specifications Annex, the Servicing Cost Day Count Fraction Convention shall be “Act/360” (as such term is defined in the 2006 ISDA Definitions);

FX_{i,date} is the applicable Currency Exchange Rate to convert one unit of the Component Currency of Component_(i) into the Strategy Currency in respect of date_(date).

Transaction Module Quantity Type	Additive
Transaction Module Cash Type	Value Effective
Transaction Module Execution Day	As defined in the Strategy Description, and if not so specified each Strategy Calculation Day
Transaction Module Execution Time Stamp	The end of the relevant Strategy Calculation Day

4. Transaction Module – Active Management

Overview

The Component Quantity of each Non-Cash Component of the Strategy may be changed periodically by the Strategy Allocator in its discretion, subject to certain controls and constraints (and calculated by reference to certa

in algorithmic transformations if the Rebalancing Instruction Type is defined as Proposed Target Weights) set out in the Strategy Description and as separately agreed in writing between the Strategy Sponsor and the Strategy Allocator. For the purposes of this Transaction Module, the term “Non-Cash Component” shall be construed as a Non-Cash Component as defined in the General Description, which is also an Immediate Component. The Strategy is, therefore, a managed strategy. The Strategy Sponsor is not the Strategy Allocator and does not determine the Transaction Quantities (albeit it may calculate them on the basis of Proposed Change in Number of Units and/or Proposed Target Weights determined by the Strategy Allocator) in respect of this Transaction Module, nor exercise any discretion save as set out in this document. The Strategy Sponsor may exercise discretion in the limited circumstances described in the Strategy Description. Further, in respect of the Strategy, the Strategy Sponsor and the Strategy Calculation Agent do not owe any person any fiduciary duties in respect of the Strategy and are not required to take the interests of any person into account in making any determination with respect thereto.

The Strategy Sponsor and the Strategy Calculation Agent (and all Relevant Persons) are not responsible for, and shall have no liability in respect of, any acts, errors or omissions of the Strategy Allocator, whether resulting from the negligence, wilful default or bad faith of the Strategy Allocator or otherwise.

Component Quantities and Transaction Quantities

The Strategy Allocator may periodically rebalance the Strategy by specifying either (i) the Proposed Change in Number of Units (as defined below), or (ii) the Proposed Target Weights (as defined below), in each case, in respect of one or more Non-Cash Components as specified in the Specifications Annex (either (i) or (ii) being the “**Rebalancing Instruction Type**”) within a set of pre-determined constraints (the “**Allocation Constraints**”). The rebalancing of one or more of the Non-Cash Components is referred to herein as a “**Parameter Adjustment**”.

Proposed Parameter Adjustment

The Strategy Allocator may notify the Strategy Sponsor by sending an adjustment notification (the “**Adjustment Notification**”) in accordance with the Notification Procedure of a proposed parameter adjustment (the “**Proposed Parameter Adjustment**”) of the quantity or target weight of one or more Non-Cash Components, the proposed day (or the proposed days) on which such parameter adjustment shall be effective (each, a “**Proposed Parameter Adjustment Day**”) and (if applicable) the Observation Day. In respect of a Proposed Parameter Adjustment, the calendar day on which the related Adjustment Notification is submitted by the Strategy Allocator to the Strategy Sponsor is the “**Notification Day**”. Unless otherwise defined in the Specifications Annex, any reference to Notification Day shall be construed to be a day in the London time-zone (the “**Strategy Time-zone**”).

An Adjustment Notification will specify the proposed change in the number of units or the proposed target weight for one or more Non-Cash Components (in respect of each such Non-Cash Component, the “**Proposed Change in Number of Units**” or the “**Proposed Target Weights**”, as specified by the Rebalancing Instruction Type), and the Rebalancing Instruction Type. In respect of an Adjustment Notification, a Non-Cash Component which is not included within it shall be deemed to have been assigned a Proposed Change in Number of Units equal to zero (0), or a Proposed Target Weight equal to the Current Weight, as applicable, in respect of such Non-Cash Component.

In the case that the Rebalancing Instruction Type is Proposed Change in Number of Units, the “**Post Divisor Proposed Change in Number of Units**” shall be computed by the Strategy Calculation Agent as (i) the Proposed Change in Number of Units of the relevant Non-Cash Component, divided by (ii) the Unit Divisor on such Proposed Parameter Adjustment Day. The Proposed Change in Number of Units and the Post Divisor Proposed Change in Number of Units may be zero (0), positive or negative amounts.

If the Proposed Parameter Adjustment satisfies (i) the “**Adjustment Conditions**” (as specified in the Specifications Annex) as of the Notification Day and (ii) the Execution Conditions, in each case, as determined by the Strategy Sponsor, then a Parameter Adjustment with respect to each relevant Non-Cash Component will take place. The day or days on which a Proposed Parameter Adjustment is implemented (each a “**Parameter Adjustment Day**”) will be determined by the Strategy Sponsor by reference to (i) the definition of “Parameter Adjustment Day” (if any) in the Strategy Description, (ii) the Rebalancing Instruction Type provided by the Strategy Allocator in the Adjustment Notification, (iii) the Component Trading Day schedule of the relevant Non-Cash Components and (iv) the date (or dates) proposed by the Strategy Allocator.

The Strategy Sponsor shall be entitled to rely upon and assume, and shall not in any circumstances be obliged to verify, that the Adjustment Conditions in respect of a Proposed Parameter Adjustment have been

satisfied. None of the Strategy Sponsor, Strategy Calculation Agent or any other Relevant Person shall be liable (whether in contract, tort or otherwise) to any person for (i) the failure of the Strategy Allocator to comply with the Adjustment Conditions in respect of a Proposed Parameter Adjustment; and/or (ii) the failure to verify that the Adjustment Conditions in respect of a Proposed Parameter Adjustment have not been satisfied.

None of the Strategy Sponsor, Strategy Calculation Agent or any other Relevant Person shall be responsible for any Proposed Parameter Adjustment, the composition of the Strategy or the performance of the Strategy. In the event that the Strategy Allocator resigns or is terminated for any reason, no further Parameter Adjustment will take place and the Strategy Sponsor may, in its sole and absolute discretion, and without notice, terminate the calculation and publication of a Strategy.

“Notification Procedure” means the procedure agreed between the Strategy Sponsor and the Strategy Allocator, which specifies the time periods and other criteria that the Strategy Allocator must satisfy in respect of a Proposed Parameter Adjustment for the Strategy.

“Relevant Person” means the Strategy Sponsor and the Strategy Calculation Agent (and all affiliates or subsidiaries, and all directors, officers, employees, representatives, delegates or agents of the Strategy Sponsor).

Parameter Adjustment

In respect of a Parameter Adjustment, the Component Quantity of a Non-Cash Component comprising the Strategy is rebalanced on the relevant Parameter Adjustment Day for such Non-Cash Component. A Parameter Adjustment may consist of one or more (or zero) Parameter Adjustment Days in respect of a given Non-Cash Component.

Subject to a Proposed Parameter Adjustment satisfying all the Adjustment Conditions and Execution Conditions, the Strategy Sponsor will implement such Proposed Parameter Adjustment in the form of one or multiple Transactions, whereby the attributes of each of such Transactions shall be as follows:

Transaction Module Execution Day	The Parameter Adjustment Day.
Strategy Transaction Time Stamp	As specified in the Specifications Annex.
Transaction Component	The relevant Non-Cash Component.
Immediate Component	As specified in the Specifications Annex.
Preliminary Component Transaction Quantity	Unless otherwise specified in the relevant Specifications Annex, in respect of a Proposed Parameter Adjustment and a Non-Cash Component: (i) in respect of each Non-Cash Component for which the Proposed Target Weight is equal to the Current Weight, the Preliminary Component Transaction Quantity shall be Component Quantity of such Non-Cash Component immediately before the execution of such Proposed Parameter Adjustment; otherwise, (ii) the Proposed Calculated Target Quantity.
Transaction Module Cash Type	“Value Neutral”, provided that if the Strategy Currency differs from the Component Currency in respect of a Non-Cash Component, the Offsetting Cash Component (as such term is defined in the General Description) generated by such Transaction shall correspond to the relevant Strategy Currency as determined by the Strategy Sponsor.
Transaction Module Quantity Type	(a) if the Rebalancing Instruction Type is specified to be Proposed Change in Number of Units, then “Additive”; otherwise (b) if the Rebalancing Instruction Type is specified to be Proposed Target Weights, then “Target”.

Because a Strategy is rebalanced only periodically, this Transaction Module will not make any adjustments to the Component Quantities of Non-Cash Components between Transaction Module Execution Days.

No Parameter Adjustment once implemented can be set aside on the basis that, as a factual matter, the Adjustment Conditions were not satisfied and/or the Notification Procedure was not complied with. The determination of the Strategy Sponsor will be conclusive and binding in all circumstances without liability to the Strategy Sponsor or any of its affiliates.

Allocation Constraints

The Allocation Constraints are set out below and, except under certain circumstances described under the section entitled “Change in Strategy Methodology” of the General Strategy Terms, may not be altered.

In respect of the Strategy, the Strategy Sponsor may, but shall not be obliged to, waive compliance with one or more

Adjustment Conditions in respect of a Proposed Parameter Adjustment or satisfaction of one or more relevant Allocation Constraints in respect of the Proposed Parameter Adjustment (in each case, in whole or in part). Any such waiver shall not effect or imply any waiver of or amendment to any Adjustment Condition or Allocation Constraint in respect of any subsequent Adjustment Notification or Proposed Parameter Adjustment in respect of such Strategy (as applicable).

For each Allocation Constraint, certain parameters related to each of them, including the applicability of each Allocation Constraint, will be specified in the Specifications Annex:

Other Constraints: means, each of the following:

Rounding Convention	<p>In respect of a Proposed Parameter Adjustment:</p> <p>(i) If the Rebalancing Instruction Type is “Proposed Target Weights”, the Proposed Target Weight in respect of each Non-Cash Component must be rounded to the Weights Rounding Convention, as defined in the Specifications Annex.</p> <p>(ii) If the Rebalancing Instruction Type is “Proposed Change in Number of Units”, the Proposed Change in Number of Units in respect of each Non-Cash Component must be an integral multiple of the Quantity Increment, and therefore will be divisible by the Quantity Increment without any remainder.</p>
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Related Definitions

Proposed Calculated Target Quantity	<p>In respect of a Proposed Parameter Adjustment for which the Rebalancing Instruction Type is Proposed Target Weights, an amount calculated in accordance with the following formula:</p> $\frac{S_{OD} \times TW_i}{Price_{i,OD} \times FX_{i,OD}}$ <p>Where: <i>Subscript (OD)</i> means the relevant Observation Day; <i>Subscript (i)</i> represents the relevant Non-Cash Component; <i>S_{date}</i> means the Strategy Value in respect of the relevant date, or if the relevant date falls prior to the Strategy Inception Date, the Strategy Initial Value; <i>TW_i</i> means the Proposed Target Weight in respect of Non-Cash Component <i>i</i>; <i>FX_{i,date}</i> means the Currency Exchange Rate in respect of Non-Cash Component <i>i</i> and the relevant date <i>date</i>; <i>Price_{i,date}</i> means the Component Timely Value in respect of Non-Cash Component <i>i</i> and the relevant date <i>date</i>. Provided that in the case that <i>TW_i</i> equals zero (0), the Proposed Calculated Target Quantity shall be equal to zero (0) notwithstanding the result of the formula set out above. In the event that the value of any component which is utilised for the calculation of a Proposed Calculated Target Quantity is subsequently corrected or restated, the Strategy Calculation Agent will not correct or restate the Proposed Calculated Target Quantity and will instead use the Proposed Calculated Target Quantity as calculated before such correction or restatement. Furthermore, a Proposed Calculated Target Quantity will be subsequently adjusted for any corporate actions that have taken effect in respect of such Non-Cash Component and/or any applicable Disruption Events, in each case, during the period commencing on (but excluding) the relevant Observation Day and ending on (and including) the relevant Basket Rebalancing Day(s). For the avoidance of doubt, such corporate actions will be applied in the same manner as such corporate actions would have been applied in respect of a Component in accordance with any relevant Strategy Calculation Agent Methodology.</p>
Current Weight	<p>With respect to a Relevant Day, the composition current weight for a given Non-Component <i>i</i> of the Strategy is:</p> <p>(i) In respect of each Non-Cash Component with no Current Weight, zero (0); otherwise</p> <p>(ii) An amount, rounded per the Weights Rounding Convention by the Strategy Sponsor, and calculated as follows:</p>

	<p>appendix 1 $\frac{q_{i, RD} \times Price_{i, RD} \times FX_{i, RD}}{S_{RD}}$</p> <p>Where:</p> <p><i>Subscript i</i> represents the relevant Non-Cash Component;</p> <p><i>Subscript RD</i> represents the Relevant Day;</p> <p><i>S_{date}</i> means the Strategy Value on the relevant date <i>date</i>, or if the relevant date falls prior to the Strategy Inception Date, the Strategy Initial Value;</p> <p><i>FX_{i, date}</i> means, (i) if Non-Cash Component <i>i</i> is denominated in a currency other than the Strategy Currency, the applicable Currency Exchange Rate on the relevant date <i>date</i>, or (ii) if Non-Cash Component <i>i</i> is denominated in the Strategy Currency, one (1);</p> <p><i>Price_{i, date}</i> means the Component Timely Value of Non-Cash Component <i>i</i> on the relevant date <i>date</i>, as determined by the Strategy Calculation Agent; and</p> <p><i>q_{i, date}</i> means the Component Quantity of Non-Cash Component <i>i</i> on the relevant date <i>date</i>, or if the relevant date falls prior to the Strategy Inception Date, zero (0).</p>
Relevant Day	<p>In respect of a Proposed Parameter Adjustment, the Strategy Calculation Day immediately preceding the Notification Day in respect of such Proposed Parameter Adjustment</p>

Section B: Asset Class Specific Definitions

Asset Class Specific Definitions – General

Terms defined in this sub-section of Section B shall apply to (a) each instrument and component defined as an Instrument or Component in Section B and (b) each Component calculated by reference to such an Instrument or Component and for which the Style specified is contained in the Component Timely and Tradable Value Table set out in this Section B.

Pricing Styles

"Component Timely and Tradable Value Table" means:

Style	Elements	Provisions
Index	Component Timely Value	The Component Timely Value of a Component on any Component Business Day will be determined as the official closing level of such Component as published by the relevant sponsor or calculation agent of such Component on such day, and "Component Timely Value" may be (among others) referred to in the Strategy Description as "Strategy Value", "Strategy Timely Value", "Strategy Closing Level" or "Index Value".
	Component Tradable Value	The Component Tradable Value of a Component on a Component Business Day will be calculated in accordance with the definition of "Strategy Tradable Level" or "Strategy Tradable Value" specified in the relevant rules in respect of such Component provided that if such Component Tradable Value 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 Component Tradable Value of such Component shall be determined by the Strategy Sponsor on such First Tradable Date acting in a commercially reasonable manner. If no such term is defined, then the Component Tradable Value of a Component on a Component Business Day shall be the Component Timely Value in respect of the First Tradable Date falling on or immediately after such Component Business Day.

Definitions related to Execution

"Disjoint Execution" will be specified as either "Applicable" or "Not Applicable" in the Strategy Description, or if not so specified, shall be deemed to be specified as "Not Applicable".

"Execution Day" means, in respect of a Component, 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 Strategy Description, each day that (a) is a Strategy Calculation Day and (b) is a Component Trading Day in respect of such Component; or
- (ii) if Disjoint Execution is specified as "Not Applicable" in the Strategy Description, each day that (a) is a Strategy Calculation Day and is a Component Trading Day in respect of all Components included in the Strategy.

"Execution Lag" means, in respect of a Component, the non-negative integer specified as such in the Strategy Description, or if not so specified, zero (0).

"Execution Start Date" means, in respect of a Rebalancing Date and a Component:

- (i) if the Execution Lag in respect of such Component is specified as zero (0), the first Execution Day in respect of such Component falling on or after such Rebalancing Date;
- (ii) otherwise, the first Execution Day in respect of such Component falling on or immediately after the number of Component Trading Days in respect of such Component equal to the Execution Lag from, but excluding, such Rebalancing Date.

"First Tradable Date" means, in respect of a Strategy Calculation Day t and:

- (i) an Instrument, 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:
 - (a) provided that if one or more Non-Tradable Event(s) in respect of such Instrument 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; and
 - (b) provided that notwithstanding the fact that a Non-Tradable Event may continue to exist on such sixth (6th) Strategy Calculation Day, if the Strategy Sponsor expects that no Non-Tradable Event will exist in respect of such Instrument shortly after such sixth (6th) Strategy Calculation Day (as 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,
 - (c) 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 last First Tradable Date in respect of all Instruments used to calculate the level of such Component.

"Rebalancing Date" means, in respect of a Reference Date, each day specified as such in the Strategy Description.

"Reference Date" means each day specified as such in the Strategy Description.

Definitions related to Components

"Component" or **"Immediate Component"** means a Terminal Component, a Non-Terminal Component or an Associated Component (in each case as specified in the Strategy Description) in respect of any Strategy Calculation Day, provided that:

- (i) if a Component Start Date is specified in the Strategy Description in respect of such Component, such Strategy Calculation Day falls on or after such Component Start Date and;
- (ii) if a Component End Date is specified in the Strategy Description in respect of such Component, such Strategy Calculation Day falls on or before the First Tradable Date in respect of such Component and the Last Fade-Out Day in respect of the Rebalancing Date falling on or immediately prior to such Component End Date.
- (iii) If an Associated Component Start Date or Associated Component End Date is specified in the Strategy Description in respect of such Component, such Strategy Calculation Day falls in the period commencing on, and including, the Associated Component Start Date in respect of such Associated Component and ending on, and including the Last Fade-Out Day in respect of the Rebalancing Date by reference to which such Associated Component Start Date is determined.

"Instrument" means each tradable instrument defined as such in the Asset Class Specific Definitions.

"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.

"Market Disruption Event" means any event defined as such or as "Disruption Event" in the Strategy Description.

"Non-Terminal Component" means each component specified as such in the Strategy.

"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:
 - such Strategy Calculation Day is not a Component Trading Day for such Component; or
 - a Market Disruption Event is occurring or existing in respect of such Component on such Strategy Calculation Day; or
 - if such Component is a Terminal Component, a Market Disruption Event is occurring or existing in respect of one or more MDE Linked Components (if so defined) in respect of such Component on such Strategy Calculation Day; or
 - 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 Strategy, the occurrence of a Non-Tradable Event in respect of any Terminal Component included in such Strategy.

"Component Timely Value", "Timely Value" or "Timely Level" means, in respect of a Component and any day, the "timely" level, price or rate of such Component on such day, as determined in accordance with the Style of such Component and as described in the Component Timely and Tradable Value Table corresponding to such Component, provided that if such day is not a day on which the level of such Component is scheduled to be published, then the Timely Value of such Component for such day shall be deemed to be the Component Timely Value of such Component on the immediately preceding day on which such Component is scheduled to be published.

"Component Tradable Value", "Tradable Level" or "Tradable Value" means, in respect of a Component and a Strategy Calculation Day, the "tradable" level or price of such Component on such Strategy Calculation Day, as determined in accordance with the Style of such Component and as described in the Component Timely and Tradable Value Table in respect of such Component.

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Specifications Annex – Goldman Sachs Commodity Rolling Excess Return Strategies

Dated: 30 March 2023

Overview

The Goldman Sachs Commodity Rolling Excess Return Strategies (each a "**Strategy**") are synthetic rules-based proprietary strategies created by Goldman Sachs International as Strategy Sponsor.

Each Strategy intends to provide a synthetic exposure to the performance of the underlying components which are a portfolio of future series (the "**Components**").

Each Strategy reflects the performance of the Components which will be rebalanced from time to time. Each Strategy also has a systematic roll feature which automatically rolls positions in the futures contracts based on a predefined roll schedule.

The Strategy Value of each Strategy can be positive or may fall below zero and have a negative value.

This overview of each Strategy is a summary and, as such, is necessarily incomplete. This overview should be read in conjunction with, and is qualified in its entirety by, the more detailed descriptions in the documents described below.

Documentation applicable to each Strategy

The rules and methodology applicable to each Strategy and other information relating to it (the "**Strategy Description**") are set out in the following documents:

- (i) The Specifications Annex which describes the parameters which apply to this specific Strategy and which are used to effect the calculations described in the General Description (the "**Specifications Annex**")
- (ii) The Goldman Sachs Strategy Methodology Description Series W (as amended from time to time) which sets out the methodology of the relevant Transaction Modules (the "**Strategy Methodology**")
- (iii) The Goldman Sachs Transaction-Based Basket Strategies (as amended from time to time) which sets out the general rules of the Strategy, including the methodology used to calculate the value of the Strategy (the "**General Description**")
- (iv) The Goldman Sachs General Strategy Terms (as amended from time to time, and a copy of which is available at this [link](#)²) which contain general matters related to several strategies of this type, such as general adjustments, publication and changes in methodology, the adjustments that may be made if disruption events and other events occur and important risk factors and disclaimers which are incorporated herein (the "**General Strategy Terms**")
- (v) Each of the documents describing the Components (if applicable).

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 Specifications Annex shall prevail over all other documentation elements).

INVESTORS IN ANY PRODUCT LINKED TO ANY STRATEGY SHOULD READ AND UNDERSTAND THIS SPECIFICATIONS ANNEX AND OTHER DOCUMENTATION ELEMENTS OF THE STRATEGY DESCRIPTION AND EACH OF THE DOCUMENTS DESCRIBING THE COMPONENTS IN THE RELEVANT STRATEGY. IN PARTICULAR INVESTORS MUST READ THE SECTIONS OF THE STRATEGY DESCRIPTION HEADED "RISK FACTORS", "CONFLICTS OF INTEREST" AND "DISCLAIMERS" AND THE RISK FACTORS IN THE DOCUMENTS DESCRIBING EACH OF THE COMPONENTS IN THE RELEVANT STRATEGY PRIOR TO MAKING ANY INVESTMENT DECISION.

² <https://www.goldmansachs.com/what-we-do/FICC-and-equities/products-and-business-groups/products/index-methodologies-docs/gs-general-strategy-terms.pdf>

Strategy Specifications applicable to each Strategy

Strategy Inception Date	8 February 2019
Strategy Currency	US Dollar ("USD")
Strategy Calculation Agent	Goldman Sachs International
Strategy Initial Value	100.0000
Strategy Value Publication Precision	4 decimal places with 0.00005 rounded upwards
Strategy Publication Data Source	https://marquee.gs.com/studio or any successor page
Return Type	The Strategy is calculated on an "excess return" basis and does not include any synthetic interest rate return on a notional cash amount.
Strategy Calculation Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Strategy Trading Day	Each calendar day which satisfies each of the following criteria: (i) Strategy Calculation Day (ii) Component Business Day in respect of all Terminal Components
Strategy Value Floor	Not Applicable
Component Timely Value Floor	Not applicable in respect of all Components

Transaction Modules applicable to each Strategy

Transaction Module Execution Order Number	Name	Applicable Modules
1	Weight Multiplier Rolling Transaction Module	Weight Multiplier Rolling Transaction Module
2	Non-Tradable Events Transaction Module	Non-Tradable Events - Standard

Component Module Table applicable to each Strategy as specified below

Strategy Name	Strategy Bloomberg Ticker	Future Series	Reference Exchange	Component Currency	Initial Component Module Target Weight	Roll-out Futures Expiry Schedule	Eligible Expiration Months	Roll Start Date Rule	Roll End Date Rule
Goldman Sachs Aluminum Rolling Excess Return Index	AGGSIA11	Aluminum	LME	USD	1	GHJKMNQUV XZF*	FGHJKMNQU VXZ	-5b	5b
Goldman Sachs Copper Rolling Excess Return Index	AGGSIC11	Copper	LME	USD	1	GHJKMNQUV XZF*	FGHJKMNQU VXZ	-5b	5b
Goldman Sachs Lead Rolling Excess Return Index	AGGSIL11	Lead	LME	USD	1	GHJKMNQUV XZF*	FGHJKMNQU VXZ	-5b	5b
Goldman Sachs Nickel Rolling Excess Return Index	AGGSIN11	Nickel	LME	USD	1	GHJKMNQUV XZF*	FGHJKMNQU VXZ	-5b	5b
Goldman Sachs Zinc Rolling Excess Return Index	AGGSIZ11	Zinc	LME	USD	1	GHJKMNQUV XZF*	FGHJKMNQU VXZ	-5b	5b
Goldman Sachs Silver Rolling Excess Return Index	AGGSI11	Silver	CME	USD	1	HHKKNNUUZ ZZH*	HKNUZ	-5b	5b
Goldman Sachs Gold Rolling Excess Return Index	AGGSGC11	Gold	CME	USD	1	GJJMMQQZZ ZZG*	GJMQZ	-5b	5b

Values specified in the table above are as of the date of this document (as specified above) and may be amended from time to time in accordance with the terms of the General Strategy Terms.

Month Letter codes for Roll-out Futures Expiry Schedule applicable to each Strategy:

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

Pricing Modules applicable to each Strategy

Asset Type	Pricing Module
FX Rate	FX Rate Pricing
Commod Future	Commod Future Pricing

Commod Future Pricing applicable to each Strategy

Commod Future Pricing Source	In respect of all Immediate Components: The official exchange close price
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FX Rate Pricing applicable to each Strategy

Currency Exchange Rate Source	In respect of all Immediate Components: The 4 p.m. LDN WMR Closing Spot Rates as published by WM Company/Refinitiv or any successor company.
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The following sections specify parameters specific to each Transaction Module and not a Strategy as a whole. Though they may reference Strategy level parameters, any parameters defined should be considered specific to the Transaction Module in which they are defined unless specified otherwise.

Weight Multiplier Rolling Transaction Module applicable to each Strategy

Parameters for Weight Multiplier Rolling Transaction Module

Rebalance Reference Date	In respect of a Transaction Module Execution Day, same day as the Transaction Module Execution Day
Roll Business Day	Each day on which the offices of Goldman Sachs & Co. LLC in New York is / are open for business
Roll Start Date	<p>In respect of a Component Module, the Roll Start Date is determined by reference to the Roll Start Date Rule specified in the Component Module Table above.</p> <p>The Roll Start Date Rule is specified in the format "x" followed by the letter "b", to denote the relevant x-th Roll Business Day of the Roll Month, where x is a number/numerical value and can be positive or negative.</p> <p>For example, (i) a Roll Start Date Rule specified as "-5b" defines the Roll Start Date as the fifth last Roll Business Day in the calendar month immediately preceding the Roll Month and (ii) a Roll Start Date Rule specified as "9b" defines the Roll Start Date as the ninth Roll Business Day of the Roll Month.</p>
Roll End Date	<p>In respect of a Component Module, the Roll End Date is determined by reference to the Roll End Date Rule specified in the Component Module Table above.</p> <p>The Roll End Date Rule is specified in the same format as the Roll Start Date Rule (as described above).</p>
Roll Month	In respect of a Strategy Calculation Day, the calendar month and calendar year into which such Strategy Calculation Day falls.
Roll-in Futures Expiry	The Roll-in Futures Expiry of a Roll Period is the Roll-out Futures Expiry of the immediate following Roll Period.

Roll-out Futures Expiry	<p>In respect of a Component Module and a Roll Period related to a calendar month, the Futures Expiration specified in the "Roll-out Futures Expiry Schedule" column in the Component Module Table above.</p> <p>The "Roll-out Futures Expiry Schedule" is specified in the format of a list of 12 letters. Each of the 12 letters indicates the Roll-out Futures Expiry corresponding to each of the 12 months starting with January. If the Roll Start Date starts with a negative sign, the Roll Period related to such month starts in the immediate preceding month. The (*) sign following the letter denotes Futures Expirations in the following year. The (**) sign following the letter denotes Futures Expirations in the second following year, etc.</p>
Custom Roll Weight	Not Applicable
Roll Fraction	In respect of each Roll Day, the amount that is equal to (i) 100%, divided by (ii) the number of Roll Days in the Roll Period.
CIM Weights	Not Applicable
Different Roll-In / Roll-Out Futures Expiry	Applicable

Non-Tradable Events Transaction Module applicable to each Strategy

Parameters for Non-Tradable Events Transaction Module

Non-Tradable Events Applicability	In respect of all Terminal Components, Applicable: Postpone Next Day
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Specifications Annex – Goldman Sachs Commodity Strategies

Dated: 16 October 2023

Overview

The Goldman Sachs Commodity Strategies (each a "**Strategy**") are synthetic rules-based proprietary strategies created by Goldman Sachs International as Strategy Sponsor. It is the intention of the Strategy Sponsor that each Strategy shall not constitute a "benchmark" for the purpose of (i) the regulation on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) 596/2014 ((EU) 2016/1011) (the "**Benchmark Regulation**") or (ii) the Benchmark Regulation as it forms part of "retained law" in the United Kingdom as defined in the European Union (Withdrawal) Act 2018 (as amended from time to time).

Each Strategy intends to provide a synthetic exposure to the performance of the underlying components which are a portfolio of future series (the "**Components**").

Each Strategy reflects the performance of the Components which will be rebalanced from time to time. Each Strategy also has a systematic roll feature which automatically rolls positions in the futures contracts based on a predefined roll schedule.

The Strategy Value of each Strategy can be positive or may fall below zero and have a negative value.

This overview of each Strategy is a summary and, as such, is necessarily incomplete. This overview should be read in conjunction with, and is qualified in its entirety by, the more detailed descriptions in the documents described below.

Documentation applicable to each Strategy

The rules and methodology applicable to each Strategy and other information relating to it (the "**Strategy Description**") are set out in the following documents:

- (i) The Specifications Annex which describes the parameters which apply to this specific Strategy and which are used to effect the calculations described in the General Description (the "**Specifications Annex**")
- (ii) The Goldman Sachs Strategy Methodology Description Series W (as amended from time to time) which sets out the methodology of the relevant Transaction Modules (the "**Strategy Methodology**")
- (iii) The Goldman Sachs Transaction-Based Basket Strategies (as amended from time to time) which sets out the general rules of the Strategy, including the methodology used to calculate the value of the Strategy (the "**General Description**")
- (iv) The Goldman Sachs General Strategy Terms (as amended from time to time, and a copy of which is available at this [link](#)³) which contain general matters related to several strategies of this type, such as general adjustments, publication and changes in methodology, the adjustments that may be made if disruption events and other events occur and important risk factors and disclaimers which are incorporated herein (the "**General Strategy Terms**")
- (v) Each of the documents describing the Components (if applicable).

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 Specifications Annex shall prevail over all other documentation elements).

INVESTORS IN ANY PRODUCT LINKED TO ANY STRATEGY SHOULD READ AND UNDERSTAND THIS SPECIFICATIONS ANNEX AND OTHER DOCUMENTATION ELEMENTS OF THE STRATEGY DESCRIPTION AND EACH OF THE DOCUMENTS DESCRIBING THE COMPONENTS IN THE RELEVANT STRATEGY. IN PARTICULAR INVESTORS MUST READ THE SECTIONS OF THE STRATEGY DESCRIPTION HEADED "RISK FACTORS" (INCLUDING THE "ADDITIONAL RISK FACTORS" BELOW), "CONFLICTS OF INTEREST" AND "DISCLAIMERS" AND THE RISK FACTORS IN THE DOCUMENTS DESCRIBING EACH OF THE COMPONENTS IN THE RELEVANT STRATEGY PRIOR TO MAKING ANY INVESTMENT DECISION.

Additional Risk Factors

The Roll Adjustment Price may be determined by the Strategy Sponsor if the Strategy Allocator does not follow the process and time constraints set out in the Notification Procedure for agreeing an alternative price

In the event that the Strategy Allocator does not respond to the Strategy Sponsor upon receipt of any relevant notification relating to the determination of a Roll Adjustment Price, the price used for the purposes of the synthetic transaction generated by the Weight Multiplier Rolling Transaction Module will be a price in respect of the relevant Component and day determined by the Strategy Sponsor acting in good faith and a commercially reasonable manner. The failure to respond to any such request to agree such price may have

³ <https://www.goldmansachs.com/what-we-do/FICC-and-equities/products-and-business-groups/products/index-methodologies-docs/gc-general-strategy-terms.pdf>

an adverse impact on the performance of the Strategy, perhaps materially so.

Determinations of Roll Adjustment Prices following the occurrence of a Price Disagreement Event

In the event that the Strategy Allocator and Strategy Sponsor are not able to agree a Roll Adjustment Price on or prior to the Cut-off Time on the relevant Transaction Module Execution Day or the Strategy Sponsor fails to notify the Strategy Allocator in respect of such Transaction Module Execution Day (each a “**Price Disagreement Event**”), the synthetic transaction generated by the Weight Multiplier Rolling Transaction Module in respect of the relevant Futures Expiration shall be deemed to not have a Transaction Price. In the event that a Price Disagreement Event is ongoing in respect of the Roll End Date of any relevant Roll Period, the price used for the purpose of unwinding exposure to the relevant Futures Expiration will be the Cash-Settled Future Final Settlement Price as published by the Reference Exchange (as defined in the Strategy Description). The failure to agree any such price may have an adverse impact on the performance of the Strategy, perhaps materially so.

Strategy Specifications applicable to each Strategy

Strategy Inception Date	In respect of <ul style="list-style-type: none"> - the Goldman Sachs Cobalt Rolling Excess Return Index: 30 April 2021 - the Goldman Sachs Steel Scrap Rolling Excess Return Index: 21 June 2022 - the Goldman Sachs Hot Rolled Coil Steel Rolling Excess Return Index: 30 April 2021 - the Goldman Sachs Hot Rolled Coil Steel Quarterly Rolling Excess Return Index: 30 April 2021 - the Goldman Sachs Lithium Rolling Excess Return Index: 4 January 2022
Strategy Currency	US Dollar ("USD")
Strategy Calculation Agent	Goldman Sachs International
Strategy Initial Value	100.0000
Strategy Allocator	LOIM
Strategy Value Publication Precision	4 decimal places with 0.00005 rounded upwards
Strategy Publication Data Source	https://marquee.gs.com/studio or any successor page
Return Type	The Strategy is calculated on an "excess return" basis and does not include any synthetic interest rate return on a notional cash amount.
Strategy Calculation Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Strategy Trading Day	Each calendar day which satisfies each of the following criteria: <ul style="list-style-type: none"> (i) Strategy Calculation Day (ii) Component Business Day in respect of all Terminal Components
Strategy Value Floor	Not Applicable
Component Timely Value Floor	Not applicable in respect of all Components

Transaction Modules applicable to each Strategy

Transaction Module Execution Order Number	Name	Applicable Modules
1	Weight Multiplier Rolling Transaction Module	Weight Multiplier Rolling Transaction Module
2	Non-Tradable Events Transaction Module	Non-Tradable Events - Standard

Component Module Table applicable to each Strategy as specified below

Strategy Name	Strategy Bloomberg Ticker	Future Series	Reference Exchange	Component Currency	Initial Component Target Weight	Roll-out Futures Expiry Schedule	Eligible Expiration Months	Roll Start Date Rule	Roll End Date Rule	Roll Price Agreement Effective Date	Roll Price Agreement End Date
Goldman Sachs Cobalt Rolling Excess Return Index	AGGSCOB E	COMEX Cobalt Metal (Fastmarkets) Futures	CME	USD	1	NF*F*F*F*F*N*N*N*N*	NF	5b	9b	11 April 2023	
Goldman Sachs Steel Scrap Rolling Excess Return Index	AGGSSSE	LME Steel Scrap CFR Turkey (Platts) Future	LME	USD	1	JJNNVVVF*F*F*	FJNV	5b	9b	11 April 2023	
Goldman Sachs Hot Rolled Coil Steel Rolling Excess Return Index	AGGSHRC E	COMEX U.S. Midwest Domestic Hot-Rolled Coil Steel Index Futures	CME	USD	1	FGHJKMNQUVXZ	FGHJKMNQUVXZ	5b	9b	11 April 2023	13 October 2023
Goldman Sachs Hot Rolled Coil Steel Quarterly Rolling Excess Return Index	AGGSHRC2	COMEX U.S. Midwest Domestic Hot-Rolled Coil Steel Index Futures	CME	USD	1	HHMMUUZZZH*	HMUZ	5b	9b	30 June 2023	

Goldman Sachs Lithium Rolling Excess Return Index	AGGSLITE	COMEX Lithium Hydroxide CIF CJK (Fastmarkets) Futures	CME	USD	1	NF*F*F*F*F*N*N*N*N*	NF	5b	9b	16 October 2023	
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Values specified in the table above are as of the date of this document (as specified above) and may be amended from time to time in accordance with the terms of the General Strategy Terms.

Month Letter codes for Roll-out Futures Expiry Schedule applicable to each Strategy:

Calendar Month	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

Pricing Modules applicable to each Strategy

Asset Type	Pricing Module
Commod Future	Commod Future Pricing

Commod Future Pricing applicable to each Strategy

Commod Future Pricing Source	In respect of all Immediate Components: The official exchange close price
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The following sections specify parameters specific to each Transaction Module and not a Strategy as a whole. Though they may reference Strategy level parameters, any parameters defined should be considered specific to the Transaction Module in which they are defined unless specified otherwise.

Weight Multiplier Rolling Transaction Module applicable to each Strategy

Parameters for Weight Multiplier Rolling Transaction Module

Rebalance Reference Date	In respect of a Transaction Module Execution Day, same day as the Transaction Module Execution Day
Roll Business Day	Each day on which the offices of Goldman Sachs & Co. LLC in New York are open for business
Roll Start Date	<p>In respect of a Component Module, the Roll Start Date is determined by reference to the Roll Start Date Rule specified in the Component Module Table above.</p> <p>The Roll Start Date Rule is specified in the format "x" followed by the letter "b", to denote the relevant x-th Roll Business Day of the Roll Month, where x is a number/numerical value and can be positive or negative.</p> <p>For example, (i) a Roll Start Date Rule specified as "-5b" defines the Roll Start Date as the fifth last Roll Business Day in the calendar month immediately preceding the Roll Month and (ii) a Roll Start Date Rule specified as "9b" defines the Roll Start Date as the ninth Roll Business Day of the Roll Month.</p>
Roll End Date	<p>In respect of a Component Module, the Roll End Date is determined by reference to the Roll End Date Rule specified in the Component Module Table above.</p> <p>The Roll End Date Rule is specified in the same format as the Roll Start Date Rule (as described above).</p>
Roll Month	In respect of a Strategy Calculation Day, the calendar month and calendar year into which such Strategy Calculation Day falls.
Roll-in Futures Expiry	The Roll-in Futures Expiry of a Roll Period is the Roll-out Futures Expiry of the immediate following Roll Period.

Roll-out Futures Expiry	<p>In respect of a Component Module and a Roll Period related to a calendar month, the Futures Expiration specified in the "Roll-out Futures Expiry Schedule" column in the Component Module Table above.</p> <p>The "Roll-out Futures Expiry Schedule" is specified in the format of a list of 12 letters. Each of the 12 letters indicates the Roll-out Futures Expiry corresponding to each of the 12 months starting with January. If the Roll Start Date starts with a negative sign, the Roll Period related to such month starts in the immediate preceding month. The (*) sign following the letter denotes Futures Expirations in the following year. The (**) sign following the letter denotes Futures Expirations in the second following year, etc.</p>
Custom Roll Weight	Not Applicable
Roll Fraction	<p>In respect of each Roll Day, the amount that is equal to (i) 100%, divided by (ii) the number of Roll Days in the Roll Period; provided, however, that if the relevant Roll Day is (1) not a Dispute Day and (2) the Roll Day immediately following one or more consecutive Dispute Days, the Roll Fraction in respect of such Roll Day shall be the sum of the Roll Fractions determined in respect of each such prior Dispute Day and such Roll Day.</p>
CIM Weights	Not Applicable
Different Roll-In / Roll-Out Futures Expiry	Applicable
Roll Price Agreement	<p>In respect of a Component Module and a Transaction Module Execution Day:</p> <ul style="list-style-type: none"> - In respect of a date prior to the Roll Price Agreement Effective Date, Not Applicable; - In respect of a date on and after the Roll Price Agreement Effective Date, and before the Roll Price Agreement End Date, Applicable; - In respect of a date on and after the Roll Price Agreement End Date, Not Applicable.
Roll Price Agreement Effective Date	<p>In respect of a Component Module, the date listed for such Component Module in the Component Module Table above.</p>

Roll Adjustment Price	<p>Subject as provided in “<i>Price Disagreement Events in respect of Roll End Dates</i>”, the Roll Adjustment Price in respect of a Transaction Component and any relevant Transaction Module Execution Day shall be determined as follows:</p> <ul style="list-style-type: none"> (i) the price as agreed between the Strategy Sponsor and the Strategy Allocator on the relevant Transaction Module Execution Day in accordance with the Notification Procedure; (ii) if (A) the Strategy Sponsor fails to notify the Strategy Allocator in respect of such Transaction Module Execution Day, or (B) no such price is agreed between the Strategy Sponsor and the Strategy Allocator on or prior to the Cut-off Time on the relevant Transaction Module Execution Day (each of (A) and (B) being a “Price Disagreement Event” and such Transaction Module Execution Day being a “Dispute Day”), the Roll Adjustment Price shall be deemed to be not applicable in respect of such Transaction Component and Transaction Module Execution Day; or (iii) if the Strategy Allocator does not respond to the Strategy Sponsor upon receipt of the Roll Price Day Notification in respect of such Transaction Module Execution Day on or prior to the Cut-off Time on such Transaction Module Execution Day, a price determined by the Strategy Sponsor in good faith and a commercially reasonable manner.
Preliminary Component Transaction Quantity	<p>Subject as provided in “<i>Price Disagreement Events in respect of Roll End Dates</i>”, in respect a Transaction Component and a Transaction Module Execution Day:</p> <ul style="list-style-type: none"> (i) if a Price Disagreement Event has not occurred in respect of such Transaction Module Execution Day, the Preliminary Component Transaction Quantity shall be determined in accordance with the Strategy Methodology; and (ii) if such Transaction Module Execution Day is a Dispute Day, then the Preliminary Component Transaction Quantity shall remain the same as the Preliminary Component Transaction Quantity on the Roll Business Day immediately preceding the relevant Proposed Parameter Adjustment that was not a Dispute Day.
Notification Procedure	The procedure agreed between the Strategy Sponsor and the Strategy Allocator, which specifies the time

	periods and other criteria that the Strategy Allocator must satisfy in respect of determining any Roll Adjustment Price.
Cut-off Time	3:00 pm London time
Price Disagreement Events in respect of Roll End Date	<p>In the event that a Transaction Module Execution Day is (A) the Roll End Date in respect of a Roll Period and (B) a Dispute Day:</p> <p>(i) the Preliminary Component Transaction Quantity in respect of any Futures Expiration that is the subject of the relevant Price Disagreement Event (a “Disputed Futures Expiration”) and such Transaction Module Execution Day shall remain the same as on the immediately preceding Roll Business Day;</p> <p>(ii) If a Price Disagreement Event exists on the Final Settlement Date of a Disputed Futures Expiration, then the Preliminary Component Transaction Quantity of that Disputed Futures Expiration will be set to zero and the Roll Adjustment Price in respect of that Disputed Futures Expiration and the Transaction Module Execution Day will be the Cash-Settled Future Final Settlement Price as published by the Reference Exchange.</p> <p>(iii) Following a Transaction Module Execution Day which is (A) the Roll End Date in respect of a Roll Period and (B) a Dispute Day, no further changes to the Preliminary Component Transaction Quantity of any Disputed Futures can take place other than as described in (ii) above.</p>

Non-Tradable Events - Standard applicable to each Strategy

Parameters for Non-Tradable Events Transaction Module

Non-Tradable Events Applicability	In respect of all Terminal Components, Applicable: Postpone Next Day
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Specifications Annex – Goldman Sachs Ethanol Index

Dated: 7 September 2022

Overview

The Goldman Sachs Ethanol Index (the "Strategy") is a synthetic rules-based proprietary strategy created by Goldman Sachs International as Strategy Sponsor

The Strategy intends to provide a synthetic exposure to the performance of the underlying components which are a portfolio of future series (the "**Components**").

The Strategy reflects the performance of the Components which will be rebalanced from time to time. The Strategy also has a systematic roll feature which automatically rolls positions in the futures contracts based on a predefined roll schedule.

The Strategy Value of this Strategy can be positive or may fall below zero and have a negative value.

This overview of the Strategy is a summary and, as such, is necessarily incomplete. This overview should be read in conjunction with, and is qualified in its entirety by, the more detailed descriptions in the documents described below.

Documentation

The rules and methodology and other information relating to this Strategy (the "**Strategy Description**") are set out in the following documents:

- (i) The Specifications Annex which describes the parameters which apply to this specific Strategy and which are used to effect the calculations described in the General Description (the "**Specifications Annex**")
- (ii) The Goldman Sachs Strategy Methodology Description Series W (as amended from time to time) which sets out the methodology of the relevant Transaction Modules (the "**Strategy Methodology**")
- (iii) The Goldman Sachs Transaction-Based Basket Strategies (as amended from time to time) which sets out the general rules of the Strategy, including the methodology used to calculate the value of the Strategy (the "**General Description**")
- (iv) The Goldman Sachs General Strategy Terms (as amended from time to time) which contain general matters related to several strategies of this type, such as general adjustments, publication and changes in methodology, the adjustments that may be made if disruption events and other events occur and important risk factors and disclaimers which are incorporated herein (the "**General Strategy Terms**")
- (v) Each of the documents describing the Components (if applicable).

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 Specifications Annex shall prevail over all other documentation elements).

INVESTORS IN ANY PRODUCT LINKED TO THIS STRATEGY SHOULD READ AND UNDERSTAND THIS SPECIFICATIONS ANNEX AND OTHER DOCUMENTATION ELEMENTS OF THE STRATEGY DESCRIPTION AND EACH OF THE DOCUMENTS DESCRIBING THE COMPONENTS IN THE RELEVANT STRATEGY. IN PARTICULAR INVESTORS MUST READ THE SECTIONS OF THE STRATEGY DESCRIPTION HEADED "RISK FACTORS", "CONFLICTS OF INTEREST" AND "DISCLAIMERS" AND THE RISK FACTORS IN THE DOCUMENTS DESCRIBING EACH OF THE COMPONENTS IN THE RELEVANT STRATEGY PRIOR TO MAKING ANY INVESTMENT DECISION.

Strategy Specifications

Strategy Inception Date	16 August 2021
Strategy Currency	US Dollar ("USD")
Strategy Calculation Agent	Goldman Sachs International
Strategy Initial Value	100.0000
Strategy Value Publication Precision	4 decimal places with 0.00005 rounded upwards
Strategy Publication Data Source	https://marquee.gs.com/studio or any successor page
Return Type	The Strategy is calculated on an "excess return" basis and does not include any synthetic interest rate return on a notional cash amount.
Strategy Calculation Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Strategy Trading Day	Each calendar day which satisfies each of the following criteria: (i) Strategy Calculation Day (ii) Component Business Day in respect of all Terminal Components
Strategy Value Floor	Not Applicable
Component Timely Value Floor	Not applicable in respect of all Components

Transaction Modules

Transaction Module Execution Order Number	Name	Applicable Modules
1	Weight Multiplier Rolling Transaction Module	Weight Multiplier Rolling Transaction Module
2	Non-Tradable Events Transaction Module	Non-Tradable Events - Standard

Component Module Table as specified below

Strategy Name	Strategy Bloomberg Ticker	Future Series	Reference Exchange	Component Currency	Initial Component Module Target Weight	Roll-out Futures Expiry Schedule	Eligible Expiration Months	Roll Start Date Rule	Roll End Date Rule
Goldman Sachs Ethanol Index	AGGSETHE	Chicago Ethanol (Platts)	CME	USD	1	GHJKMNQUV XZF*	FGHJKMNQU VXZ	5b	9b

Values specified in the table above are as of the date of this document (as specified above) and may be amended from time to time in accordance with the terms of the General Strategy Terms.

Month Letter codes for Roll-out Futures Expiry Schedule :

Calendar Month	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

Pricing Modules

Asset Type	Pricing Module
FX Rate	FX Rate Pricing
Commod Future	Commod Future Pricing

Commod Future Pricing

Commod Future Pricing Source	In respect of all Immediate Components: The official exchange close price
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FX Rate Pricing

Currency Exchange Rate Source	In respect of all Immediate Components: The 4 p.m. LDN WMR Closing Spot Rates as published by WM Company/Refinitiv or any successor company.
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The following sections specify parameters specific to each Transaction Module and not a Strategy as a whole. Though they may reference Strategy level parameters, any parameters defined should be considered specific to the Transaction Module in which they are defined unless specified otherwise.

Weight Multiplier Rolling Transaction Module

Parameters for Weight Multiplier Rolling Transaction Module

Rebalance Reference Date	In respect of a Transaction Module Execution Day, same day as the Transaction Module Execution Day
Roll Business Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Roll Start Date	<p>In respect of a Component Module, the Roll Start Date is determined by reference to the Roll Start Date Rule specified in the Component Module Table above.</p> <p>The Roll Start Date Rule is specified in the format "x" followed by the letter "b", to denote the relevant x-th Roll Business Day of the Roll Month, where x is a number/numerical value and can be positive or negative.</p> <p>For example, (i) a Roll Start Date Rule specified as "-5b" defines the Roll Start Date as the fifth last Roll Business Day in the calendar month immediately preceding the Roll Month and (ii) a Roll Start Date Rule specified as "9b" defines the Roll Start Date as the ninth Roll Business Day of the Roll Month.</p>
Roll End Date	<p>In respect of a Component Module, the Roll End Date is determined by reference to the Roll End Date Rule specified in the Component Module Table above.</p> <p>The Roll End Date Rule is specified in the same format as the Roll Start Date Rule (as described above).</p>
Roll Month	In respect of a Strategy Calculation Day, the calendar month and calendar year into which such Strategy Calculation Day falls.
Roll-in Futures Expiry	The Roll-in Futures Expiry of a Roll Period is the Roll-out Futures Expiry of the immediate following Roll Period.

Roll-out Futures Expiry	<p>In respect of a Component Module and a Roll Period related to a calendar month, the Futures Expiration specified in the "Roll-out Futures Expiry Schedule" column in the Component Module Table above.</p> <p>The "Roll-out Futures Expiry Schedule" is specified in the format of a list of 12 letters. Each of the 12 letters indicates the Roll-out Futures Expiry corresponding to each of the 12 months starting with January. If the Roll Start Date starts with a negative sign, the Roll Period related to such month starts in the immediate preceding month. The (*) sign following the letter denotes Futures Expirations in the following year. The (**) sign following the letter denotes Futures Expirations in the second following year, etc.</p>
Custom Roll Weight	Not Applicable
Roll Fraction	In respect of each Roll Day, the amount that is equal to (i) 100%, divided by (ii) the number of Roll Days in the Roll Period.
CIM Weights	Not Applicable
Different Roll-In / Roll-Out Futures Expiry	Applicable

Non-Tradable Events - Standard

Parameters for Non-Tradable Events Transaction Module

Non-Tradable Events Applicability	In respect of all Terminal Components, Applicable: Postpone Next Day
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Specifications Annex – Goldman Sachs Commodity Strategies

Dated: 30 March 2023

Overview

The Goldman Sachs Commodity Strategies (each a "**Strategy**") are synthetic rules-based proprietary strategies created by Goldman Sachs International as Strategy Sponsor.

Each Strategy intends to provide a synthetic exposure to the performance of the underlying components which are a portfolio of future series (the "**Components**").

Each Strategy reflects the performance of the Components which will be rebalanced from time to time. Each Strategy also has a systematic roll feature which automatically rolls positions in the futures contracts based on a predefined roll schedule.

The Strategy Value of each Strategy can be positive or may fall below zero and have a negative value.

This overview of each Strategy is a summary and, as such, is necessarily incomplete. This overview should be read in conjunction with, and is qualified in its entirety by, the more detailed descriptions in the documents described below.

Documentation applicable to each Strategy

The rules and methodology applicable to each Strategy and other information relating to it (the "**Strategy Description**") are set out in the following documents:

- (i) The Specifications Annex which describes the parameters which apply to this specific Strategy and which are used to effect the calculations described in the General Description (the "**Specifications Annex**")
- (ii) The Goldman Sachs Strategy Methodology Description Series W (as amended from time to time) which sets out the methodology of the relevant Transaction Modules (the "**Strategy Methodology**")
- (iii) The Goldman Sachs Transaction-Based Basket Strategies (as amended from time to time) which sets out the general rules of the Strategy, including the methodology used to calculate the value of the Strategy (the "**General Description**")
- (iv) The Goldman Sachs General Strategy Terms (as amended from time to time, and a copy of which is available at this [link](#)⁴) which contain general matters related to several strategies of this type, such as general adjustments, publication and changes in methodology, the adjustments that may be made if disruption events and other events occur and important risk factors and disclaimers which are incorporated herein (the "**General Strategy Terms**")
- (v) Each of the documents describing the Components (if applicable).

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 Specifications Annex shall prevail over all other documentation elements).

INVESTORS IN ANY PRODUCT LINKED TO ANY STRATEGY SHOULD READ AND UNDERSTAND THIS SPECIFICATIONS ANNEX AND OTHER DOCUMENTATION ELEMENTS OF THE STRATEGY DESCRIPTION AND EACH OF THE DOCUMENTS DESCRIBING THE COMPONENTS IN THE RELEVANT STRATEGY. IN PARTICULAR INVESTORS MUST READ THE SECTIONS OF THE STRATEGY DESCRIPTION HEADED "RISK FACTORS", "CONFLICTS OF INTEREST" AND "DISCLAIMERS" AND THE RISK FACTORS IN THE DOCUMENTS DESCRIBING EACH OF THE COMPONENTS IN THE RELEVANT STRATEGY PRIOR TO MAKING ANY INVESTMENT DECISION.

Strategy Specifications applicable to each Strategy

Strategy Inception Date	In respect of : <ul style="list-style-type: none">- The Goldman Sachs Tin Rolling Excess Return Index, 8 Feb 2019- The Goldman Sachs Lumber Rolling Excess Return Index, 31 Jan 2019
Strategy Currency	US Dollar ("USD")
Strategy Calculation Agent	Goldman Sachs International
Strategy Initial Value	100.0000
Strategy Value Publication Precision	4 decimal places with 0.00005 rounded upwards
Strategy Publication Data Source	https://marquee.gs.com/studio or any successor page
Return Type	The Strategy is calculated on an "excess return" basis and does not include any synthetic interest rate return on a notional cash amount.
Strategy Calculation Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Strategy Trading Day	Each calendar day which satisfies each of the following criteria: <ul style="list-style-type: none">(i) Strategy Calculation Day(ii) Component Business Day in respect of all Terminal Components
Strategy Value Floor	Not Applicable
Component Timely Value Floor	Not applicable in respect of all Components

Transaction Modules applicable to each Strategy

Transaction Module Execution Order Number	Name	Applicable Modules
1	Weight Multiplier Rolling Transaction Module	Weight Multiplier Rolling Transaction Module
2	Non-Tradable Events Transaction Module	Non-Tradable Events - Standard

Component Module Table applicable to each Strategy as specified below

Strategy Name	Strategy Bloomberg Ticker	Future Series	Reference Exchange	Component Currency	Initial Component Module Target Weight	Roll-out Futures Expiry Schedule	Eligible Expiration Months	Roll Start Date Rule	Roll End Date Rule
Goldman Sachs Tin Rolling Excess Return Index	AGGSIS11	Tin	LME	USD	1	GHJKMNQUVXZF*	FGHJKMNQUVXZ	-5b	5b
Goldman Sachs Lumber Rolling Excess Return Index	AGGSLUME	Lumber (see note 1)	CME	USD	1	HHKKNNUXXF*F* (see note 1)	FHKNUX	1b	10b

Values specified in the table above are as of the date of this document (as specified above) and may be amended from time to time in accordance with the terms of the General Strategy Terms.

¹The Roll-Out Futures Expiry Schedule for the Goldman Sachs Lumber Rolling Excess Return Index <AGGSLUME> refers to the CME Random Length Lumber Futures Contract from the Strategy Inception Date to and including the April 2023 Roll Period. The Roll-Out Futures Expiry Schedule from and including the May 2023 Roll Period refer to the CME Lumber Futures Contract. For the avoidance of doubt, this means that, for the April 2023 Roll Period, the Roll-Out Futures Expiry refers to the CME Random Length Lumber Futures Contract, and the Roll-In Futures Expiry refers to the CME Lumber Futures Contract.

Month Letter codes for Roll-out Futures Expiry Schedule applicable to each Strategy:

Calendar Month	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

Pricing Modules applicable to each Strategy

Asset Type	Pricing Module
FX Rate	FX Rate Pricing
Commod Future	Commod Future Pricing

Commod Future Pricing applicable to each Strategy

Commod Future Pricing Source	In respect of all Immediate Components: The official exchange close price
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FX Rate Pricing applicable to each Strategy

Currency Exchange Rate Source	In respect of all Immediate Components: The 4 p.m. LDN WMR Closing Spot Rates as published by WM Company/Refinitiv or any successor company.
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The following sections specify parameters specific to each Transaction Module and not a Strategy as a whole. Though they may reference Strategy level parameters, any parameters defined should be considered specific to the Transaction Module in which they are defined unless specified otherwise.

Weight Multiplier Rolling Transaction Module applicable to each Strategy

Parameters for Weight Multiplier Rolling Transaction Module

Rebalance Reference Date	In respect of a Transaction Module Execution Day, same day as the Transaction Module Execution Day
Roll Business Day	Each day on which the offices of Goldman Sachs & Co. LLC in New York is / are open for business
Roll Start Date	<p>In respect of a Component Module, the Roll Start Date is determined by reference to the Roll Start Date Rule specified in the Component Module Table above.</p> <p>The Roll Start Date Rule is specified in the format "x" followed by the letter "b", to denote the relevant x-th Roll Business Day of the Roll Month, where x is a number/numerical value and can be positive or negative.</p> <p>For example, (i) a Roll Start Date Rule specified as "-5b" defines the Roll Start Date as the fifth last Roll Business Day in the calendar month immediately preceding the Roll Month and (ii) a Roll Start Date Rule specified as "9b" defines the Roll Start Date as the ninth Roll Business Day of the Roll Month.</p>
Roll End Date	<p>In respect of a Component Module, the Roll End Date is determined by reference to the Roll End Date Rule specified in the Component Module Table above.</p> <p>The Roll End Date Rule is specified in the same format as the Roll Start Date Rule (as described above).</p>
Roll Month	In respect of a Strategy Calculation Day, the calendar month and calendar year into which such Strategy Calculation Day falls.
Roll-in Futures Expiry	The Roll-in Futures Expiry of a Roll Period is the Roll-out Futures Expiry of the immediate following Roll Period.

Roll-out Futures Expiry	<p>In respect of a Component Module and a Roll Period related to a calendar month, the Futures Expiration specified in the "Roll-out Futures Expiry Schedule" column in the Component Module Table above.</p> <p>The "Roll-out Futures Expiry Schedule" is specified in the format of a list of 12 letters. Each of the 12 letters indicates the Roll-out Futures Expiry corresponding to each of the 12 months starting with January. If the Roll Start Date starts with a negative sign, the Roll Period related to such month starts in the immediate preceding month. The (*) sign following the letter denotes Futures Expirations in the following year. The (**) sign following the letter denotes Futures Expirations in the second following year, etc.</p>
Custom Roll Weight	Not Applicable
Roll Fraction	In respect of each Roll Day, the amount that is equal to (i) 100%, divided by (ii) the number of Roll Days in the Roll Period.
CIM Weights	Not Applicable
Different Roll-In / Roll-Out Futures Expiry	Applicable

Non-Tradable Events Transaction Module applicable to each Strategy

Parameters for Non-Tradable Events Transaction Module

Non-Tradable Events Applicability	In respect of all Terminal Components, Applicable: Postpone Next Day
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Specifications Annex – Goldman Sachs Commodity Rolling Excess Return Strategies

Dated: 7 September 2022

Overview

The Goldman Sachs Commodity Rolling Excess Return Strategies (each a "**Strategy**") are synthetic rules-based proprietary strategies created by Goldman Sachs International as Strategy Sponsor.

Each Strategy intends to provide a synthetic exposure to the performance of the underlying components which are a portfolio of future series (the "**Components**").

Each Strategy reflects the performance of the Components which will be rebalanced from time to time. Each Strategy also has a systematic roll feature which automatically rolls positions in the futures contracts based on a predefined roll schedule.

The Strategy Value of each Strategy can be positive or may fall below zero and have a negative value.

This overview of each Strategy is a summary and, as such, is necessarily incomplete. This overview should be read in conjunction with, and is qualified in its entirety by, the more detailed descriptions in the documents described below.

Documentation applicable to each strategy

The rules and methodology applicable to each strategy and other information relating to it (the "**Strategy Description**") are set out in the following documents:

- (i) The Specifications Annex which describes the parameters which apply to this specific Strategy and which are used to effect the calculations described in the General Description (the "**Specifications Annex**")
- (ii) The Goldman Sachs Strategy Methodology Description Series W (as amended from time to time) which sets out the methodology of the relevant Transaction Modules (the "**Strategy Methodology**")
- (iii) The Goldman Sachs Transaction-Based Basket Strategies (as amended from time to time) which sets out the general rules of the Strategy, including the methodology used to calculate the value of the Strategy (the "**General Description**")
- (iv) The Goldman Sachs General Strategy Terms (as amended from time to time) which contain general matters related to several strategies of this type, such as general adjustments, publication and changes in methodology, the adjustments that may be made if disruption events and other events occur and important risk factors and disclaimers which are incorporated herein (the "**General Strategy Terms**")
- (v) Each of the documents describing the Components (if applicable).

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 Specifications Annex shall prevail over all other documentation elements).

INVESTORS IN ANY PRODUCT LINKED TO ANY STRATEGY SHOULD READ AND UNDERSTAND THIS SPECIFICATIONS ANNEX AND OTHER DOCUMENTATION ELEMENTS OF THE STRATEGY DESCRIPTION AND EACH OF THE DOCUMENTS DESCRIBING THE COMPONENTS IN THE RELEVANT STRATEGY. IN PARTICULAR INVESTORS MUST READ THE SECTIONS OF THE STRATEGY DESCRIPTION HEADED "RISK FACTORS", "CONFLICTS OF INTEREST" AND "DISCLAIMERS" AND THE RISK FACTORS IN THE DOCUMENTS DESCRIBING EACH OF THE COMPONENTS IN THE RELEVANT STRATEGY PRIOR TO MAKING ANY INVESTMENT DECISION.

Strategy Specifications applicable to each strategy

Strategy Inception Date	8 February 2019
Strategy Currency	US Dollar ("USD")
Strategy Calculation Agent	Goldman Sachs International
Strategy Initial Value	100.0000
Strategy Value Publication Precision	4 decimal places with 0.00005 rounded upwards
Strategy Publication Data Source	https://marquee.gs.com/studio or any successor page
Return Type	The Strategy is calculated on an "excess return" basis and does not include any synthetic interest rate return on a notional cash amount.
Strategy Calculation Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Strategy Trading Day	Each calendar day which satisfies each of the following criteria: (i) Strategy Calculation Day (ii) Component Business Day in respect of all Terminal Components
Strategy Value Floor	Not Applicable
Component Timely Value Floor	Not applicable in respect of all Components

Transaction Modules applicable to each strategy

Transaction Module Execution Order Number	Name	Applicable Modules
1	Weight Multiplier Rolling Transaction Module	Weight Multiplier Rolling Transaction Module
2	Non-Tradable Events Transaction Module	Non-Tradable Events - Standard

Component Module Table applicable to each strategy as specified below

Strategy Name	Strategy Bloomberg Ticker	Future Series	Reference Exchange	Component Currency	Initial Component Module Target Weight	Roll-out Futures Expiry Schedule	Eligible Expiration Months	Roll Start Date Rule	Roll End Date Rule
Goldman Sachs Platinum Rolling Excess Return Index	AGGSPL11	Platinum	CME	USD	1	JJJNNVVVF* F*F*	FJNV	-5b	5b
Goldman Sachs Palladium Rolling Excess Return Index	AGGSPA11	Palladium	CME	USD	1	HHMMUUUZ ZZH*	HMUZ	-5b	5b

Values specified in the table above are as of the date of this document (as specified above) and may be amended from time to time in accordance with the terms of the General Strategy Terms.

Month Letter codes for Roll-out Futures Expiry Schedule applicable to each strategy:

Calendar Month	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

Pricing Modules applicable to each strategy

Asset Type	Pricing Module
FX Rate	FX Rate Pricing
Commod Future	Commod Future Pricing

Commod Future Pricing applicable to each strategy

Commod Future Pricing Source	In respect of all Immediate Components: The official exchange close price
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FX Rate Pricing applicable to each strategy

Currency Exchange Rate Source	In respect of all Immediate Components: The 4 p.m. LDN WMR Closing Spot Rates as published by WM Company/Refinitiv or any successor company.
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The following sections specify parameters specific to each Transaction Module and not a Strategy as a whole. Though they may reference Strategy level parameters, any parameters defined should be considered specific to the Transaction Module in which they are defined unless specified otherwise.

Weight Multiplier Rolling Transaction Module applicable to each strategy

Parameters for Weight Multiplier Rolling Transaction Module

Rebalance Reference Date	In respect of a Transaction Module Execution Day, same day as the Transaction Module Execution Day
Roll Business Day	Days on which the offices of Goldman Sachs & Co. LLC are open for business in New York
Roll Start Date	<p>In respect of a Component Module, the Roll Start Date is determined by reference to the Roll Start Date Rule specified in the Component Module Table above.</p> <p>The Roll Start Date Rule is specified in the format "x" followed by the letter "b", to denote the relevant x-th Roll Business Day of the Roll Month, where x is a number/numerical value and can be positive or negative.</p> <p>For example, (i) a Roll Start Date Rule specified as "-5b" defines the Roll Start Date as the fifth last Roll Business Day in the calendar month immediately preceding the Roll Month and (ii) a Roll Start Date Rule specified as "9b" defines the Roll Start Date as the ninth Roll Business Day of the Roll Month.</p>
Roll End Date	<p>In respect of a Component Module, the Roll End Date is determined by reference to the Roll End Date Rule specified in the Component Module Table above.</p> <p>The Roll End Date Rule is specified in the same format as the Roll Start Date Rule (as described above).</p>
Roll Month	In respect of a Strategy Calculation Day, the calendar month and calendar year into which such Strategy Calculation Day falls.
Roll-in Futures Expiry	The Roll-in Futures Expiry of a Roll Period is the Roll-out Futures Expiry of the immediate following Roll Period.

Roll-out Futures Expiry	<p>In respect of a Component Module and a Roll Period related to a calendar month, the Futures Expiration specified in the "Roll-out Futures Expiry Schedule" column in the Component Module Table above.</p> <p>The "Roll-out Futures Expiry Schedule" is specified in the format of a list of 12 letters. Each of the 12 letters indicates the Roll-out Futures Expiry corresponding to each of the 12 months starting with January. If the Roll Start Date starts with a negative sign, the Roll Period related to such month starts in the immediate preceding month. The (*) sign following the letter denotes Futures Expirations in the following year. The (**) sign following the letter denotes Futures Expirations in the second following year, etc.</p>
Custom Roll Weight	Not Applicable
Roll Fraction	In respect of each Roll Day, the amount that is equal to (i) 100%, divided by (ii) the number of Roll Days in the Roll Period.
CIM Weights	Not Applicable
Different Roll-In / Roll-Out Futures Expiry	Applicable

Non-Tradable Events - Standard applicable to each strategy

Parameters for Non-Tradable Events Transaction Module

Non-Tradable Events Applicability	In respect of all Terminal Components, Applicable: Postpone Next Day
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THE GOLDMAN SACHS TRANSACTION-BASED BASKET STRATEGIES

GENERAL DESCRIPTION

Dated: 30 January 2024

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1. Introduction, Strategy Purpose and Important Information

A. Introduction

The Goldman Sachs Transaction-Based Basket Strategies (each, a "**Strategy**" and together, the "**Strategies**") are a group of notional rules-based proprietary Strategies which Goldman Sachs International (or its successor) as strategy sponsor (the "**Strategy Sponsor**") may create from time to time.

Each Strategy is initially calculated and published by the entity designated in the Specifications Annex (as defined below) and may thereafter by such person as the Strategy Sponsor may appoint from time to time to make certain determinations and calculations and to publish the value of the Strategies as described in the Strategy Description (as defined below) (the "**Strategy Calculation Agent**"). The Strategy Sponsor does not have any obligation to ensure that the Strategy Calculation Agent continues to publish the value of a Strategy and the Strategy Calculation Agent may discontinue publication at any time.

The description of each Strategy comprises this document (the "**General Description**"), the "**Specifications Annex**" and may also comprise other documentation elements (each an "**Other Documentation Element**"). The list of documentation elements comprising the "**Strategy Description**" of a Strategy are set out in the Specifications Annex.

References in this General Description to the "**Strategy**" shall be construed as references to the relevant Strategy named in the Specifications Annex in respect of such Strategy and all provisions in the General Strategy Terms, this General Description and any Other Documentation Element shall be construed, unless otherwise stated, in relation to such Strategy. Capitalised terms used but not defined in this General Description shall have the meanings given to them in the Strategy Description.

INVESTORS IN ANY PRODUCT LINKED TO A STRATEGY ARE ADVISED TO READ AND UNDERSTAND THE GENERAL STRATEGY TERMS, THIS GENERAL DESCRIPTION, THE RELEVANT SPECIFICATIONS ANNEX AND ANY OTHER DOCUMENTATION ELEMENT. IN PARTICULAR, BUT WITHOUT LIMITATION, INVESTORS MUST READ ANY SECTIONS HEADED "RISK FACTORS", "CONFLICTS OF INTEREST" AND "DISCLAIMERS" (HOWSOEVER DEFINED OR HEADED) IN EACH SUCH DOCUMENT PRIOR TO MAKING ANY INVESTMENT DECISION.

B. Strategy Purpose of the Strategies

Each Strategy is designed to provide investors with a synthetic exposure to the performance of a basket (the "**Basket**") of Components, which may include assets from one or more asset classes and/or geographical areas and which may be denominated in various currencies.

In respect of the "**Strategy Inception Date**", each Component underlying a Strategy is assigned a quantity (in respect of each Component, the "**Component Quantity**") which will be the "**Initial Component Quantity**" in respect of such Component. The Initial Component Quantity in respect of a Component shall either be (i) a fixed amount, (ii) determined on the Strategy Inception Date based on Transactions generated by one or more Transaction Modules or (iii) zero, in each case, as specified or determined in accordance with the Specifications Annex. If no Initial Component Quantity is specified in the Specifications Annex in respect of a Component then the Initial Component Quantity of such Component shall be:

- (i) Equal to the Strategy Initial Value if such Component is the Strategy Currency Cash Component.
- (ii) Otherwise: Zero.

Thereafter, the Component Quantities of the Components are determined on each Strategy Calculation Day based on Transactions that are generated by the Transaction Modules. Each Transaction Module consists of parameters or specifications, the values of which determine the

Transactions, if any, generated by such Transaction Module, and accordingly, the Component Quantity in respect of each Component.

Each Strategy is denominated in a currency specified in the Specifications Annex (the “**Strategy Currency**”). The Specifications Annex and/or Other Documentation Elements of a Strategy may specify that such Strategy has an internal simulated currency hedge mechanism, in respect of Components which are denominated in a currency (the “**Component Currency**”) other than the Strategy Currency (each a “**Foreign Currency**”) that seeks to offset a portion of the positive or negative effects of currency exchange rate fluctuations in such Component Currency against the Strategy Currency on the value of the Strategy.

The general principles described in this Section 1.B “*Strategy Purpose of the Strategies*” of this General Description along with any other overview or description contained in the relevant Specifications Annex and the General Strategy Terms are referred to as the “**Strategy Purpose**” of a Strategy.

C. Important Information

The information set out in this General Description reflects the policies of the Strategy Sponsor and is subject to change in accordance with the General Strategy Terms and/or any Other Documentation Elements in respect of a Strategy.

The purposes, aims and intentions of the algorithms and methodologies summarised in the Strategy Description may not be achieved. Investors should read each of this General Description, the relevant Specifications Annex, the General Strategy Terms and any Other Documentation Element in their entirety. Investors should pay particular attention to the risk factors and conflicts of interest set out therein.

Each of Section 2 “*Description of the Strategies*”, Section 3 “*Transaction Modules and the Determination of the Component Quantities*” and Section 6 “*Publication of Strategy Values*” of this General Description are subject to, and qualified by, Section 4 “*Computation of Strategy Values*” of this General Description. In particular, in the event of any inconsistency between the aforementioned sections, Section 4 “*Computation of Strategy Values*” of this General Description shall prevail.

The value of a Strategy could become negative, unless otherwise specified in the relevant Specifications Annex.

A Strategy may be:

- (i) a systematic Strategy (i.e. operated according to a set of pre-determined rules as set out in the Strategy Description in respect of such Strategy);
- (ii) an actively managed Strategy (where the Component Quantity or the Transaction Quantity in respect of each Component may be changed periodically by a third party (a “**Strategy Allocator**”, as may be specified in the relevant Specifications Annex) in its discretion, subject to certain controls and constraints set out in the Strategy Description); or
- (iii) a combination of (i) and (ii), as set out in the Strategy Description.

Investors should read any relevant risk factors in the Strategy Description to fully understand the risks of a fully systemic or actively managed Strategy, as applicable.

Each Strategy as referenced in (i), (ii) and (iii) above operates according to a set of pre-determined rules as summarised in the Strategy Description, and the Strategy Sponsor and Strategy Calculation Agent do not exercise discretion except in the limited circumstances summarised in the Strategy Description. Neither of the Strategy Sponsor or Strategy Calculation Agent owes any person any fiduciary duties in respect of a Strategy and neither are

required to take the interest of any person into account in making any determinations with respect thereto.

The Strategy Sponsor owns the copyright and all other rights in each Strategy and each Strategy Description. No use or publication may be made of a Strategy or any value thereof without the prior written approval of the Strategy Sponsor. The "*Goldman Sachs Transaction-Based Basket Strategy*" and the "*Goldman Sachs Transaction-Based Basket Strategies*" are service marks of Goldman Sachs International.

Each version of this document is dated. Upon each update to a new version of this document, 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. Description of the Strategies

A. Composition of the Components

The Components of a Strategy and any information (including any additional risk factors) related to them are specified in the Specifications Annex for such Strategy. Each Strategy shall be comprised of a number of:

- (i) underlying assets (including, without limitation, indices, shares, futures contracts, funds, exchange traded funds, options, foreign exchange forward contracts, over-the-counter derivative instruments and other types of financial instruments) (each a “**Non-Cash Component**”) and
- (ii) notional amounts representing cash positions in the Component Currency of each Component (each a “**Cash Component**”), including the cash position denominated in the Strategy Currency (the “**Strategy Currency Cash Component**”) and cash positions denominated in currencies other than the Strategy Currency (each a “**Foreign Currency Cash Component**”, if any),

in each case, as specified in the relevant Specifications Annex.

The Specifications Annex of a Strategy will specify the Non-Cash Components which are immediate underlyers of the Strategy (the “**Immediate Components**”). The relevant Specifications Annex may further specify if each Immediate Component is a “**Terminal Component**” or “**Non-Terminal Component**”. If not so specified, an Immediate Component shall be considered to be a Terminal Component. The Cash Components of a Strategy shall be considered Terminal Components and shall also be part of the Immediate Components of a Strategy.

The Component Quantity in respect of a Cash Component decreases when the Basket synthetically invests in units of a Non-Cash Component with a positive Component Timely Value and a Component Currency corresponding to such Cash Component. The Component Quantity of a Cash Component increases when the Basket synthetically disposes of units in a Non-Cash Component with a positive Component Timely Value and a Component Currency corresponding to such Cash Component.

A Non-Cash Component and Cash Component shall be considered a “**Component**” in respect of a Strategy from (and including) the first Strategy Transaction Time Stamp and Strategy Calculation Day on which a Transaction is effected that assigns a non-zero Component Quantity to such Non-Cash Component or Cash Component (as the case may be), in each case, as further set out in the Strategy Description. Therefore, the Components in respect of a Strategy may change over time.

The “**Allocated Components**” in respect of a given Strategy Calculation Day and Time Stamp are all Components with a non-zero Component Quantity (which may be a positive or negative amount).

B. Determination of Component Timely Values

The Component Timely Value of a Component is defined in respect of each Input Data Observation Time Stamp (as defined below) on each “**Component Business Day**” (as specified in the Specifications Annex) in respect of such Component.

The “**Component Timely Value**” of a Component in respect of a Component Business Day and a Time Stamp is:

- (i) in respect of a Non-Cash Component, as determined in accordance with the formula or methodology in respect of such Non-Cash Component specified in the Specifications Annex and any relevant Other Documentation Elements; and

- (ii) in respect of a Cash Component, a constant value of one (1).

If the Component Timely Value Floor (as specified in the Specifications Annex) is applicable in respect of a Component and the Component Timely Value of such Component on a Strategy Calculation Day and Time Stamp would be zero or less than zero, then the Component Timely Value in respect of such Strategy Calculation Day and Time Stamp and each subsequent Strategy Calculation Day and Time Stamp shall be zero. If the Component Timely Value Floor in respect of a Component is not specified as applicable (or does not contain any specification regarding the Component Timely Value Floor in respect of a Component) then the Component Timely Value of such Component may be a negative value.

The Strategy Calculation Agent may, in its sole discretion, make adjustments to the determination of the Component Timely Value of a Component under certain circumstances as further described in the Strategy Description.

The Component Timely Value of a Component in respect of (i) a Strategy Calculation Day which is not a Component Business Day in respect of such Component; and/or (ii) any time or time period that is not an Input Data Observation Time Stamp in respect of such Component (either (i) or (ii) constitutes a “**Non Component Timely Value Observation Time**”), shall, in each case, be determined in accordance with the Component Timely Value Convention (as specified in the Specifications Annex). Such Component Timely Value Convention may, without limitation, calculate the Component Timely Value of such Component by reference to previous Component Timely Values. If no Component Timely Value Convention is specified in the Specifications Annex then the Component Timely Value of a Component at such Non Component Timely Value Observation Time shall be the Component Timely Value of such Component in respect of the immediately preceding Input Data Observation Time Stamp.

C. Composition of the Basket

The Basket intends to track the value of the Components, as converted into the Strategy Currency and weighted by their respective Component Quantities. The Component Quantities in respect of the Components are assigned and rebalanced periodically via Transactions which are generated by Transaction Modules. Such rebalancing of the Component Quantities of a Component may take place on any Strategy Calculation Day and on any Strategy Transaction Time Stamp. Please see Section 3 “*Transaction Modules and the Determination of Component Quantities*” of this General Description for an overview of the determination of the Component Quantities and their periodic rebalancing via Transactions.

Under certain circumstances, as described in the Strategy Description, the Strategy Calculation Agent may delay the rebalancing of one or more Components.

The Component Quantity of a Component in respect of a Strategy Calculation Day and Time Stamp can be positive, negative or zero. A Strategy may have a long or short exposure (or no exposure), from time to time, to each of the Components. The sum of the actual weights of all Non-Cash Components may be greater than, equal to, or less than 100 per cent. A Strategy will provide a leveraged exposure to the Non-Cash Components if such sum exceeds 100 per cent and will provide a diluted exposure to the Components if such sum falls below 100 per cent.

D. Time Stamps

Subject as further described in the Strategy Description, each of the calculation of the Strategy Value, the notional execution of Transactions generated by Transaction Modules and the valuation of the Components or other input data shall be effected at specific Time Stamps.

The “**Time Stamps**” in respect of a Strategy Calculation Day and a Strategy shall consist of each of the following:

- (i) the Strategy Valuation Time Stamps (as defined in Section 2.E “*Calculation of the Strategy Value*”);
- (ii) the Strategy Transaction Time Stamps (as defined in Section 3.B “*Transactions*”); or
- (iii) the “**Input Data Observation Time Stamps**”, which specify at which time(s) a Strategy may observe the values of a Component or other input data,

in each case, as further specified in the Strategy Description.

Each Time Stamp may refer to:

- (i) the end of a Strategy Calculation Day; or
- (ii) a specific time or window of time on a Strategy Calculation Day as specified in the relevant Strategy Description.

Therefore, the Component Quantity in respect of a Component may fluctuate between Strategy Calculation Days and during the course of a Strategy Calculation Day.

E. Calculation of the Strategy Value

The value of a Strategy (the “**Strategy Value**”) is calculated on each “**Strategy Calculation Day**” (as specified in the Specifications Annex) and published in respect of each Strategy Valuation Time Stamp on such Strategy Calculation Day.

The “**Strategy Valuation Time Stamps**” in respect of a Strategy consist of:

- (i) the end of day time stamp (“**EOD Strategy Valuation Time Stamp**”); and
- (ii) if specified in the relevant Specifications Annex, one or more “**Intraday Strategy Valuation Time Stamps**”.

On each Strategy Calculation Day, the Strategy Value in respect of each Strategy will be calculated on the EOD Strategy Valuation Time Stamp and, if applicable, on each Intraday Strategy Valuation Time Stamp.

Unless the documentation of any Linked Products explicitly references any Intraday Strategy Valuation Time Stamps, any references to the “Strategy Value” of a Strategy in the documentation of Linked Products shall be construed as references to the EOD Strategy Valuation Time Stamp on the relevant Strategy Calculation Day.

The Strategy Value as of the Strategy Inception Date (the “**Strategy Initial Value**”) may be specified in the Specifications Annex. If no Strategy Initial Value is specified in the relevant Specifications Annex then the Strategy Initial Value of a Strategy shall be 100. On the Strategy Inception Date, a Strategy will only have one Strategy Value (being the Strategy Value in respect of the EOD Strategy Valuation Time Stamp), irrespective of the number of Strategy Valuation Time Stamps specified in the Specifications Annex.

On each Strategy Calculation Day and on each Strategy Valuation Time Stamp following the Strategy Inception Date, the Strategy Value is calculated based on:

- (i) the Component Timely Value of each Component, weighted by its respective Component Quantity, and
- (ii) the value of any applicable currency exchange rate used to convert the Component Timely Value of a Component from the relevant Component Currency to the Strategy Currency (the “**Currency Exchange Rate**” in respect of a Component Currency).

The calculation of a Strategy Value is described in more detail in Section 4 “*Computation of Strategy Values*” of this General Description.

If the Strategy Value Floor (as specified in the Specifications Annex) is applicable in respect of a Strategy and the Strategy Value on a Strategy Calculation Day and Strategy Valuation Time Stamp would be zero or less than zero, then the Strategy Value in respect of such Strategy Calculation Day and such Strategy Valuation Time Stamp and each subsequent Strategy Calculation Day and Strategy Valuation Time Stamp shall be zero. If the Specification Annex does not state that the Strategy Value Floor is applicable (or does not contain any specification regarding the Strategy Value Floor), then the Strategy Value in respect of a Strategy Calculation Day and on a Strategy Valuation Time Stamp may be a negative value.

Under certain circumstances described in the Strategy Description, the Strategy Calculation Agent may delay or amend the calculation of the Strategy Value.

The Specifications Annex may define the “**Strategy Trading Days**” in respect of a Strategy.

F. The Effect on a Strategy Value of Deductions Representing Costs and Expenses

A Strategy may be calculated so as to include deductions that synthetically reflect the replication costs that a hypothetical investor may incur if such hypothetical investor were to enter into, maintain and/or dispose of, a series of direct investment positions to provide the same exposure to the Components of such Strategy (including, without limitation, transaction costs, servicing costs, financing costs and roll costs). If specified as applicable in the Specifications Annex of any given Strategy, such deductions will be implemented via Transaction Modules which reduce the Component Quantity of one or more Cash Components, which in turn will have the effect of reducing the Strategy Value. As a result, the Strategy Value of such Strategy from time to time may be reduced by these deductions.

In addition, if so specified in the Specifications Annex, a Strategy Deduction Rate will be deducted from the Strategy Value in respect of each Strategy Calculation Day falling after the Strategy Inception Date. The “**Strategy Deduction Rate**” is an annual rate, expressed as a percentage of the Strategy Value. If specified as applicable in the relevant Specifications Annex for any given Strategy, the Strategy Deduction Rate will be implemented via a Transaction Module which reduces the Component Quantity of one or more Cash Components, which in turn will have the effect of reducing the Strategy Value.

Further details regarding such notional costs and deductions in respect of a Strategy can be found in the Strategy Description.

G. Non-Tradable Events

The Strategy Description may define “**Non-Tradable Events**” in respect of one or more Components.

Subject as provided in Section 3.F “*Amendment and Cancellation of a Transaction*” of this General Description, if a Non-Tradable Event occurs in respect of a Component (a “**Non-Tradable Component**”) in respect of a Strategy Calculation Day and Strategy Valuation Time Stamp, the Strategy Sponsor will calculate a tradable value of the Strategy (a “**Strategy Tradable Value**”) in respect of such Strategy Calculation Day and Strategy Valuation Time Stamp using the same methodology for calculating the Strategy Value as set out in Section 4 “*Computation of Strategy Values*” of this General Description save that the “**Component Tradable Value**” (determined in accordance with the specifications of such Non-Tradable Component as set out in the Strategy Description) in respect of the Non-Tradable Component shall be used in place of the Component Timely Value in the “Strategy Value” formula in Section 4 “*Computation of Strategy Values*”. For the avoidance of doubt, if a Non-Tradable Event occurs then the execution of Transactions and the computation of Transaction Quantities shall be performed in accordance with the methodology described in the relevant Specifications Annex or the Other Documentation Elements and no such replacement of the Component Timely

Value with the Component Tradable Value shall take place for the purpose of determining such Transactions or computing such Transaction Quantities.

If no Non-Tradable Event has occurred in respect of any Component in respect of a Strategy Calculation Day and Strategy Valuation Time Stamp, the Strategy Tradable Value in respect of such Strategy Calculation Day and Strategy Valuation Time Stamp shall be equal to the Strategy Value in respect of such Strategy Calculation Day and Strategy Valuation Time Stamp.

If a Non-Tradable Event has occurred in respect of a Component in respect of a Strategy Calculation Day and Strategy Valuation Time Stamp then, unless specified otherwise in the Strategy Description, such Component Tradable Value shall be equal to the Component Timely Value of such Component as of the relevant Strategy Valuation Time Stamp on the immediately following Strategy Calculation Day on which no Non-Tradable Events prevail in respect of such Component.

The Component Tradable Value of a Component in respect of (i) a Strategy Calculation Day which is not a Component Business Day in respect of such Component; and/or (ii) any time or time period that is not an Input Data Observation Time Stamp in respect of such Component (either (i) or (ii) constitutes a “**Non Component Tradable Value Observation Time**”), shall, in each case, be determined in accordance with the Component Tradable Value Convention (as specified in the Specifications Annex). Such Component Tradable Value Convention may, without limitation, calculate the Component Tradable Value of such Component by reference to following Component Tradable Values. If no Component Tradable Value Convention is specified in the Specifications Annex then the Component Tradable Value of a Component at such Non Component Tradable Value Observation Time shall be the Component Tradable Value of such Component in respect of the immediately following Input Data Observation Time Stamp.

3. Transaction Modules and the Determination of the Component Quantities

A. Transaction Modules

Each Strategy uses one or more algorithms (each being a “**Transaction Module**”) to change the Component Quantity of the Components. The Transaction Modules applicable to a Strategy (the “**Applicable Transaction Modules**”) shall be set out in the relevant Strategy Description and the parameters of the Transaction Modules are specified in the Specifications Annex.

The algorithms underlying a Transaction Module may be systematic, actively managed, or a combination thereof. Transaction Modules may be used for various purposes including, without limitation, to implement the economic rationale of a Strategy and to make certain adjustments to a Strategy to make it a tradable and replicable strategy. Changes to the composition of the Basket of a Strategy are generally effected via Transactions which are generated by Transaction Modules.

B. Transactions

Each Transaction Module shall compute synthetic transactions in respect of one or more Components (each a “**Transaction Component**” in respect of such Transaction). Such computed synthetic transaction in respect of a Strategy Calculation Day, a Strategy Transaction Time Stamp and each individual Transaction Component is a “**Transaction**”.

A Transaction has the following attributes:

- (i) the Strategy Calculation Day on which such Transaction is executed;
- (ii) the “**Strategy Transaction Time Stamp**” on which such Transaction is notionally executed on the relevant Strategy Calculation Day;
- (iii) the Transaction Component to which such Transaction relates;
- (iv) the Transaction Quantity;
- (v) the Transaction Price;
- (vi) the Associated Transaction Module (being the name of the Transaction Module that has generated such Transaction);
- (vii) any relevant data fields which are associated with such Transaction (as specified in the description of the relevant Transaction Module);
- (viii) the Transaction Module Cash Type in respect of the Transaction Module that has generated such Transaction (as further described in Section 3.C “*Transaction Module Cash Type*” below); and
- (ix) the Transaction Module Quantity Type that has generated such Transaction (as further described in Section 3.D “*Transaction Module Quantity Type and Transaction Quantities*” below).

The “**Transaction Price**” with respect to a Transaction shall be, unless otherwise specified in the description of the relevant Transaction Module, the Component Timely Value in respect of the Transaction Component and the relevant Strategy Transaction Time Stamp on the relevant Strategy Calculation Day.

In respect of a Transaction Module, a Strategy Calculation Day and a Strategy Transaction Time Stamp, a Strategy may generate more than one Transaction. For the avoidance of doubt, a single Transaction will only have the effect of changing the Component Quantity of a single Component.

In respect of each Transaction:

- (i) the Strategy Calculation Day on which such Transaction is executed shall be the **“Transaction Module Execution Day”** of the relevant Transaction Module which has generated such Transaction; and
- (ii) the Strategy Transaction Time Stamp on which such Transaction is executed shall be **“Transaction Module Execution Time Stamp”** of the relevant Transaction Module which has generated such Transaction.

The Component Quantity of a Component in respect of a Time Stamp and a Strategy Calculation Day will be an amount equal to the sum of (i) the Initial Component Quantity in respect of such Component and (ii) the sum of the Transaction Quantities of all Transactions relating to such Component which have been effected up to (and including) such Time Stamp on such Strategy Calculation Day.

Under certain circumstances described in the Strategy Description, the Strategy Calculation Agent in its sole discretion, may delay, modify or cancel a Transaction.

The Transaction Modules in respect of a Strategy shall be executed, and the corresponding Transactions shall be computed, during the course of each Strategy Calculation Day in the order of their respective Transaction Module Execution Time Stamps. In the event that more than one Transaction Module has the same Transaction Module Execution Time Stamp in respect of a Strategy Calculation Day, the relevant Transaction Modules shall be executed in the order in which they appear in the Strategy Description, unless Transaction Module Execution Order Numbers have been specified in the Specifications Annex, in which case the relevant Transaction Modules shall be executed in accordance with their Transaction Module Execution Order Numbers. Unless otherwise specified in the relevant Specifications Annex, the Transaction Module Execution Time Stamp in respect of a Transaction Module shall be the end of the relevant Strategy Calculation Day.

C. Transaction Module Cash Type

The **“Transaction Module Cash Type”** in respect of a Transaction Module will either be:

- (i) **“Value Neutral”**, meaning that a Transaction generated by such Transaction Module will not lead to a change in the Strategy Value; or
- (ii) **“Value Effective”**, meaning that a Transaction generated by such Transaction Module will lead to a change in the Strategy Value.

The Transaction Module Cash Type of a Transaction Module will be specified in the Specifications Annex or the Other Documentation Elements of a Strategy.

Any Transaction (a **“Value Neutral Transaction”**) generated by a Transaction Module with the Transaction Module Cash Type specified as “Value Neutral” will result in the automatic generation of a second Transaction (an **“Offsetting Cash Transaction”**) in the Cash Component (the **“Offsetting Cash Component”**) that corresponds to the Component Currency of the relevant Transaction Component of the Value Neutral Transaction. The attributes of such Offsetting Cash Transaction shall be as follows:

- (i) the Strategy Calculation Day of the Offsetting Cash Transaction shall be equal to the Strategy Calculation Day of the Value Neutral Transaction;
- (ii) the Strategy Transaction Time Stamp of the Offsetting Cash Transaction shall be equal to the Strategy Transaction Time Stamp of the Value Neutral Transaction;
- (iii) the Transaction Component of the Offsetting Cash Transaction shall be the Offsetting Cash Component; and

- (iv) and the Transaction Quantity of the Offsetting Cash Transaction shall be equal to:

$$TQ_{Offset} = -1 \times TQ_{ValueNeutral} \times TP_{ValueNeutral}$$

where:

Subscript_(Offset) refers to the Offsetting Cash Transaction;

Subscript_(ValueNeutral) refers to the Value Neutral Transaction;

TQ_{Offset} is the Transaction Quantity of the Offsetting Cash Transaction;

$TQ_{ValueNeutral}$ is the Transaction Quantity of the Value Neutral Transaction; and

$TP_{ValueNeutral}$ is the Transaction Price of the Value Neutral Transaction.

D. Transaction Module Quantity Type and Transaction Quantities

The “**Transaction Module Quantity Type**” in respect of a Transaction Module shall be either “Additive” or “Target”. The Transaction Module Quantity Type of a Transaction Module will be specified in the relevant Other Documentation Element.

The “**Transaction Quantity**” in respect of a Transaction specifies the number of units by which the Component Quantity of a Component will change as a result of a Transaction. A positive Transaction Quantity has the effect of increasing the Component Quantity of a Component and, vice versa, a negative Transaction Quantity has the effect of decreasing the Component Quantity of a Component. The Transaction Quantity in respect of a Transaction generated by a Transaction Module shall be determined as follows:

- (i) in respect of a Transaction generated by a Transaction Module with the Transaction Module Quantity Type specified as “Additive”, the Transaction Quantity shall be equal to the “**Preliminary Component Transaction Quantity**” in respect of such Transaction Module (as specified in the relevant Other Documentation Element); and
- (ii) in respect of a Transaction generated by a Transaction Module with the Transaction Module Quantity Type specified as “Target”, the Transaction Quantity will be calculated as follows:

$$TQ_x = TQ_x^{Preliminary} - q_i^{Preceding}$$

where:

Subscript_(x) refers to the relevant Transaction;

Subscript_(i) refers to the relevant Component;

TQ_x is the Transaction Quantity of the relevant Transaction;

$TQ_x^{Preliminary}$ is the Preliminary Component Transaction Quantity of the relevant Transaction as determined in accordance with the Other Documentation Elements; and

$q_i^{Preceding}$ is the Component Quantity of Component_(i) immediately before the execution of such Transaction.

E. Basket States

The generation of Transactions may result in the list of Components and/or their Component Quantities (together the “**Basket State**”) being amended in respect of a relevant Strategy Calculation Day and Strategy Transaction Time Stamp. The Basket State in respect of a Strategy Calculation Day and Strategy Transaction Time Stamp may be used as an input in the calculation of Transactions generated by a Transaction Module in respect of a further Strategy Transaction Time Stamp if so specified in the relevant Other Documentation Element.

F. Amendment and Cancellation of Transactions

Notwithstanding Section 2.G “*Non-Tradable Events*” of this General Description, and if so specified in the Strategy Description, if a Non-Tradable Event occurs in respect of a Component, one or more Transactions generated by a Transaction Module may be amended, postponed or cancelled (each a “**Non-Tradable Transaction**”). Please refer to the Specifications Annex and Other Documentation Elements for further details.

4. Computation of Strategy Values

Strategy Value The Strategy Value on the Strategy Inception Date is equal to the Strategy Initial Value.

On each Strategy Calculation Day(t) from (but excluding) the Strategy Inception Date the Strategy Value in respect of a Strategy Valuation Time Stamp (u) will be calculated as follows:

$$S_{t,u} = \sum_{i=1}^n q_{i,t,u} \times A_{i,t,u} \times FX_{i,t,u}$$

Where:

Subscript (t) refers to the relevant Strategy Calculation Day;

Subscript (u) refers to the relevant Strategy Valuation Time Stamp;

Subscript (i) refers to the relevant Component;

n is the number of Components contained in the Basket at Strategy Valuation Time Stamp u on Strategy Calculation Day (t);

$q_{i,t,u}$ is the Component Quantity(i) in respect of Strategy Calculation Day (t) and Strategy Valuation Time Stamp u ;

$A_{i,t,u}$ is the Component Timely Value(i) in respect of Strategy Calculation Day(t) and Strategy Valuation Time Stamp u ; and

$FX_{i,t,u}$ is the applicable Currency Exchange Rate to convert one unit of the Component Currency of Component(i) into the Strategy Currency in respect of Strategy Calculation Day (t) and Strategy Valuation Time Stamp u .

Component Quantity The Component Quantity in respect of a Component, a Strategy Calculation Day and a Time Stamp shall be computed as follows:

$$q_{i,t,u}^{\square} = q_i^{initial} + \sum_x TQ_x$$

where:

Subscript (i) refers to the relevant Component;

Subscript (t) refers to the relevant Strategy Calculation Day;

Subscript (u) refers to the relevant Time Stamp;

Subscript (x) refers to each Transaction for which Component i is the Transaction Component and:

- (i) which has occurred on any Strategy Calculation Day preceding Strategy Calculation Day t ; or
- (ii) which has occurred on or before Time Stamp u on Strategy Calculation Day t .

$q_i^{initial}$ is Initial Component Quantity of Component i ;

TQ_x is the Transaction Quantity of the relevant Transaction.

Currency Exchange Rate

The Currency Exchange Rate shall be one (1) in respect of each Strategy Calculation Day and Time Stamp for the case where the relevant Component Currency is equal to the Strategy Currency.

The Currency Exchange Rate to convert one unit of the relevant Component Currency into the Strategy Currency in respect of a Strategy Calculation Day and a Strategy Valuation Time Stamp shall be calculated by the Strategy Calculation Agent using the currency exchange rates of the relevant non U.S. Dollar currencies in such currency pair against the U.S. Dollar, as published by the relevant Currency Exchange Rate Source.

The days and times on which the Currency Exchange Rates are usually fixed and published, as determined by the Strategy Calculation Agent, by the Currency Exchange Rate Source are referred to herein as "**Currency Fixing Days**" and "**Currency Fixing Time Stamps**", respectively.

Unless a different "**Currency Exchange Rate Convention**" is specified in the relevant Specifications Annex, if any Strategy Calculation Day and Time Stamp is not a Currency Fixing Day and Currency Fixing Time Stamp then the Currency Exchange Rate in respect of such day and such Time Stamp shall be the Currency Exchange Rate published by the Currency Exchange Rate Source in respect of the relevant Currency Fixing Time Stamp on the immediately preceding Currency Fixing Day.

Basket Transaction Cost Rate

On any given Strategy Calculation Day (t) from (and including) the Strategy Inception Date the Basket Transaction Cost Rate in respect of a Strategy Valuation Time Stamp (u) is calculated as follows:

$$TC_{t,u}^B = \sum_{i=1}^n (TC_{i,t,u}^A \times |w_{i,t,u}^B|)$$

Where:

Subscript (t) refers to the relevant Strategy Calculation Day;

Subscript (u) refers to the relevant Strategy Valuation Time Stamp;

n is the number of Components contained in the Basket at Strategy Valuation Time Stamp u on Strategy Calculation Day (t);

$TC_{i,t,u}^A$ is the Component Transaction Cost Rate in respect of Strategy Calculation Day (t) and Strategy Valuation Time Stamp (u) for Component (i); and

$w_{i,t,u}^B$ is the Component Weight Equivalent in respect of Strategy Calculation Day (t) and Strategy Valuation Time Stamp (u) for Component (i).

Component Weight Equivalent

On any given Strategy Calculation Day (t) from (and including) the Strategy Inception Date, the Component Weight Equivalent in respect of each Component and a Time Stamp (u) is calculated as follows:

$$w_{i,t,u}^B = q_{i,t,u} \times \frac{A_{i,t,u} \times FX_{i,t,u}}{S_{t,u}}$$

Where:

Subscript (i) refers to the relevant Component;

Subscript (t) refers to the relevant Strategy Calculation Day;

Subscript (u) refers to the relevant Time Stamp;

$q_{i,t,u}$ is the Component Quantity (i) in respect of Strategy Calculation Day (t) and Time Stamp u ;

$A_{i,t,u}$ is the Component Timely Value (i) in respect of Strategy Calculation Day (t) and Strategy Valuation Time Stamp u ;

$FX_{i,t,u}$ is the applicable Currency Exchange Rate to convert one unit of the Component Currency of Component (i) into the Strategy Currency in respect of Strategy Calculation Day (t) and Strategy Valuation Time Stamp u ; and

$S_{t,u}$ is the Strategy Value in respect of Strategy Calculation Day (t) and Strategy Valuation Time Stamp u .

5. Composition Look-Through

If Composition Look-Through is not specified to be applicable in the relevant Specifications Annex (or if the relevant Specifications Annex does not contain any specification regarding the Composition Look-Through) then the following provisions of this Section 5 “*Composition Look-Through*” are not applicable in respect of a Strategy. Otherwise, if “**Composition Look-Through**” is specified to be applicable in the relevant Specifications Annex, then the following provisions of this Section 5 “*Composition Look-Through*” shall apply.

A. Composition of the Basket if Composition Look-Through is Applicable

A Strategy will determine the Non-Cash Components of the Basket and the corresponding Component Quantities via a mechanism which decomposes the Immediate Components of a Strategy into its Terminal Components, such that the Basket solely consists of Terminal Components as its only Non-Cash Components. The “**Terminal Components**” of a Strategy consist of:

- (i) all Immediate Components of the Strategy which are not explicitly specified to be Non-Terminal Components in the Strategy Description (the “**Immediate Terminal Components**”); and
- (ii) the Terminal Components contained within each Immediate Component of the Strategy when such Immediate Component is specified to be a Non-Terminal Component (the “**Indirect Terminal Components**”).

The Components of the Basket of a Strategy for the purpose of computing the Strategy Value shall consist of:

- (i) the Terminal Components of the Strategy as defined above; and
- (ii) each Cash Component of the Strategy.

The following shall not be considered to be Components of the Basket for the purpose of computing the Strategy Value:

- (i) each Immediate Component which is a Non-Terminal Component; and
- (ii) each Cash Component which is an underlyer of an Immediate Component.

A given type of Terminal Component may appear more than once in the composition of the Basket. For instance, it may be an Immediate Terminal Component and an Indirect Terminal Component at the same time. Equally, it may be an Indirect Terminal Component which is contained in multiple Immediate Components of the Strategy at the same time.

Consequently, the Component Quantity of a Terminal Component in respect of a Strategy Calculation Day and a Strategy Valuation Time Stamp shall be computed as:

$$q_{i,t,u} = \sum_{j \in M} q_{j,t,u}^{Immediate} \times q_{i,t,u}^{Indirect}$$

Where:

Subscript (t) refers to the relevant Strategy Calculation Day;

Subscript (u) refers to the relevant Strategy Valuation Time Stamp;

Subscript (i) refers to the relevant Terminal Component;

Subscript (j) refers to an Immediate Component which is contained in set *M*;

M is the set of Immediate Components which either:

- (i) is a Terminal Component of type i ; or
- (ii) contains a Terminal Component of type i either as an Immediate Terminal Component or as an Indirect Terminal Component at Strategy Valuation Time Stamp u on Strategy Calculation Day (t) ;

$q_{j,t,u}^{Immediate}$ is the Component Quantity of Immediate Component j in respect of Strategy Calculation Day t and Strategy Valuation Time Stamp u ; and

$q_{i,t,u}^{Indirect}$ is equal to:

- (i) one (1) if the relevant Immediate Component j is an Immediate Terminal Component of type i of the Strategy; or otherwise
- (ii) the Component Quantity of the Indirect Terminal Component i within Immediate Component j in respect of Strategy Calculation Day t and Strategy Valuation Time Stamp u .

B. Transactions if Composition Look-Through is Applicable

If a Transaction Module executes a Transaction whereby the Transaction Component is a Non-Terminal Component then such Transaction (the “**Non-Terminal Component Transaction**”) shall be void and instead be replaced with one or multiple Transactions with respect to the relevant Indirect Terminal Components which are contained within such Non-Terminal Component (each a “**Terminal Component Transaction**”). A separate Terminal Component Transaction shall be generated in respect of each Indirect Terminal Component which is contained within such Non-Terminal Component on the relevant Strategy Calculation Day and Strategy Transaction Time Stamp. The attributes of each Terminal Component Transaction shall be identical to the attributes of the Non-Terminal Component Transaction (including, without limitation, the Transaction Module Quantity Type and the Transaction Module Cash Type), save that:

- (i) The Transaction Component shall be the relevant Indirect Terminal Component;
- (ii) The Preliminary Component Transaction Quantity shall be the product of:
 - (i) the Preliminary Component Transaction Quantity of the Non-Terminal Component Transaction; multiplied by
 - (ii) the Component Quantity of the relevant Indirect Terminal Component within the Non-Terminal Component on the relevant Strategy Calculation Day and Strategy Transaction Time Stamp, whereby such Component Quantity shall reflect all Transactions which have taken effect on such Strategy Calculation Day and Strategy Transaction Time within the Non-Terminal Component; and
- (iii) The Transaction Price shall be, unless otherwise specified in the description of the relevant Transaction Module, the Component Timely Value in respect of the Terminal Component on the relevant Strategy Transaction Time Stamp and Strategy Calculation Day.

If the relevant Non-Terminal Component Transaction has been generated by a Transaction Module with the Transaction Module Cash Type being specified as “Value Neutral” then an Offsetting Cash Transaction shall be generated in respect of each Terminal Component Transaction and no Offsetting Cash Transaction shall occur in respect of the void Non-Terminal Component Transaction.

6. Publication of Strategy Values

The Strategy Calculation Agent will publish the Strategy Value of a Strategy in respect of each Strategy Valuation Time Stamp in respect of a Strategy Calculation Day on the “**Strategy Publication Data Source**” according to the “**Strategy Value Publication Precision**” (in each case, as may be set out in the Specifications Annex) in accordance with the Strategy Description. Unless otherwise specified in the relevant Specifications Annex, the Strategy Publication Data Source in respect of a Strategy shall be <https://marquee.gs.com/studio> or any successor page. Also unless otherwise specified in the relevant Specifications Annex, the Strategy Value Publication Precision in respect of a Strategy shall be 2 decimal places with 0.005 rounded upwards.

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The Goldman Sachs General Strategy Terms

Date: 10 November 2023

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INTRODUCTION, APPLICATION, COPYRIGHT AND INCORPORATION

1. Introduction and Incorporation

This document, the Goldman Sachs General Strategy Terms (as may be amended from time to time as provided herein, the "**General Strategy Terms**"), comprises certain rules, disclaimers, risk factors 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 "**Strategy**" and together, the "**Strategies**").

In respect of a Strategy, these General Strategy Terms should be read in conjunction with the following documents (to the extent that they are specified to be applicable and/or incorporated by reference in respect of a Strategy):

- (i) the relevant base or general description comprising certain rules, methodology, definitions, disclaimers, conflicts of interest and/or other information applicable to such Strategy (in respect of such Strategy, the "**General Description**");
- (ii) the relevant supplement or specifications annex to such General Description specifying, amongst other things, the name of such Strategy and specific terms, dates and/or parameters applicable to such Strategy (the "**Specifications Annex**"); and
- (iii) any other documentation element(s) referred to in such General Description or Specifications Annex (the "**Other Documentation Elements**").

For the purposes of applying the General Description, Specifications Annex and/or Other Documentation Elements to these General Strategy Terms, each expression in the General Description, Specifications Annex and/or Other Documentation Element to:

- (a) "Immediate Component" shall be deemed to be references to "Component";
- (b) "Index" (whether as a separate term or as part of a larger term – e.g. "Index Sponsor") shall be deemed to be references to "Strategy" (save for any larger terms which already include "Strategy" – e.g. "Successor Index Strategy Component" – in which case the term shall be read without reference to "Index");
- (c) "Strategy Supplement" shall be deemed to be references to "Specifications Annex"; and
- (d) "Parameter Adjustment Agent", "Strategy Rebalancing Entity" or "Strategy Rebalancing Agent" shall be deemed references to "Strategy Allocator".

These General Strategy Terms may be amended or modified from time to time at the discretion of the Strategy 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.

Any or all of the provisions and sections of these General Strategy Terms may be incorporated into and made applicable to the relevant General Description, Specifications Annex and/or Other Documentation Element in respect of a Strategy. When the relevant General Description, Specifications Annex and/or Other Documentation Element in respect of a Strategy incorporates these General Strategy Terms, unless such document states otherwise, the most recent version of the General Strategy Terms shall be deemed to be applicable, as updated, amended and/or supplemented from time to time.

2. Application

These General Strategy Terms, when read together with the relevant General Description, Specifications

Annex and/or Other Documentation Element in respect of a Strategy (as applicable), will constitute the "**Strategy Description**" in respect of such Strategy.

Capitalised terms used in these General Strategy Terms but not defined herein have the meaning given to them in the relevant General Description, Specifications Annex or Other Documentation Element, as the case may be. In the event of any inconsistency between the provisions of the relevant General Description, Specifications Annex and/or Other Documentation Element and the provisions of these General Strategy Terms, the provisions of the relevant General Description, Specifications Annex and/or Other Documentation Element will prevail. In respect of each Strategy, unless otherwise specified in the relevant Specifications Annex, in the event of any inconsistency between the provisions of the relevant General Description, Specifications Annex and/or Other Documentation Element, the provisions of the relevant Specifications Annex will prevail.

A Strategy may be linked to one or more other Strategies, each of which may in turn be linked to one or more Strategies, and so on (each such strategy, an "**Underlying Strategy**"). In such case, potential investors should also refer to the relevant strategy description or rules relating to each such Underlying Strategy (which may or may not comprise these General Strategy Terms, a General Description, Specifications Annex or Other Documentation Element, in each case, applicable to the Underlying Strategy) for the specific description, methodology, rules, disclaimers, risk factors and/or conflicts of interest applicable to such Underlying Strategy.

In respect of each Strategy, the Strategy Sponsor will appoint a strategy calculation agent (the "**Strategy Calculation Agent**"), as specified in the relevant General Description, Specifications Annex and/or Other Documentation Element to make certain determinations and calculations and to publish the value of such Strategy as more particularly described in the relevant General Description, Specifications Annex and/or Other Documentation Element. The Strategy Sponsor does not have any obligation to ensure that the Strategy Calculation Agent continues to publish, and the Strategy Calculation Agent may discontinue publication of, the value of any Strategy at any time. The Strategy Sponsor may at any time in respect of a Strategy appoint one or more replacement Strategy Calculation Agents including itself or an affiliate.

The Strategy Sponsor may also appoint other agents and/or third-party data providers in relation to a Strategy to obtain certain inputs necessary to compute the value of such Strategy (including, without limitation, Input Data Providers (as defined below)). The Strategy 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 Strategy. The Strategy Sponsor may change any agents and/or third-party data providers appointed in respect of a Strategy at any time.

Each Strategy may be comprised of a number of:

- (i) components and/or sub-components (including but not limited to Underlying Strategies, financial instruments and assets) which may be (direct or indirect) underlying assets of such Strategy (each, a "**Component**");
- (ii) input data (including but not limited to any price or level) which is used to determine, or which constitutes, any weight(s), signal(s) or other values or parameters in relation to a Component; and
- (iii) any other input data (other than a Component) or software package used in the calculation of a Strategy ((ii) and (iii) together, "**Input Data**").

None of the Strategies are sponsored, endorsed, sold, or promoted by the sponsor of any Component comprising, directly or indirectly, a Strategy, other than where the Strategy Sponsor is also the sponsor of such Component. Each such sponsor does not make any representation whatsoever, whether express or implied, either as to the results to be obtained from the use of any such Component and/or the prices, levels or values at which any Component stands at any particular time on any particular date or otherwise.

Each Strategy is a synthetic product and the exposure of each Strategy to any position in a Component (which may itself represent a notional investment in one or more other Components) is purely notional. There is no actual portfolio of underlying indices, financial instruments, inputs, 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 Strategy Sponsor or the Strategy Calculation Agent to promote or purchase, enter into and/or hold positions in any Component, or transactions or investments that are linked to any Component at any time. References in any Strategy Description to any investment, disposal or acquisition of any Component should not be construed as imposing any obligation on the Strategy Sponsor, the Strategy Calculation Agent or any person to actually acquire or dispose of any such Component, investment or other property but are references to, and relate solely to, the calculation of the value of each Strategy.

Unless otherwise specified in the Strategy Description, the methodology for each Strategy does not pursue any environmental, social and governance (“**ESG**”) objectives or take into account any ESG factors.

Investors in any product or transaction linked to a Strategy (together, “**Linked Products**”) should read and understand these General Strategy Terms in full. In particular, investors must read the sections of these General Strategy Terms entitled “*Conflicts of Interest*”, “*Risk Factors*” and “*Disclaimers*” in addition to the additional disclaimers, conflicts of interest and risk factors (if any) set out in the relevant General Description, Specifications Annex, Other Documentation Element and/or the other relevant strategy documentation elements in respect of each Strategy and each of its Components prior to making any investment decision.

3. Copyright

The Strategy Sponsor owns the copyright and all other rights to the applicable Strategies. No use or publication may be made of a Strategy or any value thereof without the prior written approval of the Strategy Sponsor.

DETERMINATIONS OF GOLDMAN SACHS AS STRATEGY SPONSOR AND/OR STRATEGY CALCULATION AGENT

Unless otherwise specified in the Strategy Description, 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 methodology) made by the Strategy Sponsor or, only when Goldman Sachs is appointed as Strategy Calculation Agent, the Strategy Calculation Agent, as the case may be, in respect of a Strategy shall be made in good faith and in a commercially reasonable manner. All such determinations and calculations will be subject to the Strategy Sponsor's or the Strategy Calculation Agent's (as applicable) policies and procedures and will (in the absence of manifest error) be final, conclusive and binding. The Strategy Sponsor and/or the Strategy Calculation Agent, as applicable, shall have no responsibility to any person for any errors or omissions in any determination or calculation. In making any determinations with respect to a Strategy, the Strategy Sponsor and the Strategy Calculation Agent do not owe any person any fiduciary duties in respect of a Strategy and are not required to take the interests of any person into account in making any determination with respect thereto.

DISRUPTION EVENTS AND CONSEQUENCES

In the event of any inconsistency between the provisions of this “Disruption Events and Consequences” section and the provisions of any relevant General Description, Specifications Annex and/or Other Documentation Element in respect of a Strategy, the provisions of the relevant General Description, Specifications Annex and/or Other Documentation Element shall prevail for the purposes of such Strategy.

Disruption Events and Consequences

For the purposes of these General Strategy Terms, a “**Disruption Event**” shall mean any of the events listed in sub-paragraphs (i) to (ix) of this section entitled “*Disruption Events and Consequences*”.

(i) **Disruption Events applicable in respect of all Components and/or Input Data**

For the purposes of this sub-paragraph (i) only, a “**Relevant Underlying**” shall mean a Component or any Input Data in respect of the relevant Strategy. For the avoidance of doubt, the Other Disruption Events outlined in this sub-paragraph (i) shall not supersede or replace any Disruption Events in respect of a Relevant Underlying listed in sub-paragraphs (ii) to (ix) below (as applicable) and shall apply in addition to such Disruption Events in respect of a Relevant Underlying.

If, in respect of a Strategy or a Relevant Underlying, any one or more of the following events (each, an “**Other Disruption Event**”) occur:

- (a) the Strategy Sponsor becomes aware of (I) the adoption of, or change in, any applicable law or (II) the promulgation of, or any change in, the interpretation of any applicable law by a court, tribunal or regulatory authority with competent jurisdiction, which has the effect that (A) the performance by the Strategy Sponsor or Strategy Calculation Agent of their respective roles in respect of a Strategy has become unlawful, impracticable or would result in materially increased costs to them in whole or in part for any reason, or (B) the Strategy Sponsor and/or any of its affiliates would be prevented from entering into transactions in respect of such Strategy or Relevant Underlying (including any Relevant Underlying where the Strategy Sponsor and/or any of its affiliates is sponsor and/or calculation agent) by any applicable law or regulation;
- (b) the Strategy Sponsor determines that a Hedging Party would (A) be unable, after using commercially reasonable efforts, to acquire, establish, re-establish, substitute, maintain, unwind, or dispose of all or a portion of any hedge position relating to such Strategy and/or Relevant Underlying or (B) incur an increased cost in doing so, including, but not limited to, due to any capital requirements or other law or regulation (a “**Hedging Disruption**”);
- (c) a trading disruption occurs in respect of the relevant trading venue or any other similar event or circumstance occurs which, in the reasonable judgement of the Strategy Sponsor, (A) affects the ability of market participants in general to enter into transactions in respect of such Relevant Underlying in a notional size required in relation to any product or transaction linked to the relevant Strategy, (B) impairs the liquidity of any transactions in relation to such Relevant Underlying and/or (C) affects the value of such Relevant Underlying;
- (d) any other event described in the Strategy Description as an Additional Market Disruption Event occurs;
- (e) the occurrence of a systems failure, 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, Strategy Calculation Agent or any of their respective affiliates that the Strategy Sponsor determines is likely to have a material effect on a Relevant Underlying, or on its ability to perform its role in respect of the Strategy (a “**Force Majeure Event**”);

- (f) the official price, level, rate or other measure of any Relevant Underlying is unavailable or incomplete on any relevant day on which such measure is scheduled to be published or provided to the Strategy Sponsor (including cases where a member of the Goldman Sachs Group is the sponsor, calculation agent or provider of such Relevant Underlying);
- (g)
 - (I) an Unscheduled Holiday occurs in respect of a trading venue or Relevant Underlying;
 - (II) a trading venue or the sponsor or provider of a Relevant Underlying publicly announces that a day that was previously not a Scheduled Business Day in respect of such trading venue or Relevant Underlying (as applicable) shall be considered a Scheduled Business Day in respect of such trading venue or Relevant Underlying (as applicable) and the Strategy Sponsor determined (acting in good faith and a commercially reasonable manner) that such announcement did not occur within a reasonable amount of time prior to such day; or
 - (III) any relevant trading venue (including, without limitation, any physical trading floor and/or electronic trading platform) is not open for trading during its full regular trading session, or closes prior to its scheduled closing time, in each case, on any relevant day.

For the purposes of this sub-paragraph (g), “**Unscheduled Holiday**” means in respect of any relevant day and a trading venue or Relevant Underlying, such day is not a business day in respect of such trading venue or Relevant Underlying (as applicable) (a “**Scheduled Business Day**”) and the Strategy Sponsor was not aware of such fact by means of a public announcement within a reasonable amount of time prior to such relevant day (as determined by the Strategy Sponsor in good faith and a commercially reasonable manner);

- (h) the level, price or other value of such Strategy and/or Relevant Underlying is, in the reasonable judgement of the Strategy Sponsor or Strategy Calculation Agent, manifestly incorrect,
- (i) where required, the Strategy Sponsor (after using commercially reasonable efforts) ceases to have the relevant data license in respect of such Relevant Underlying;
- (j) any authorisation, registration, recognition, endorsement, equivalence decision, approval or inclusion in any official register in respect of such Strategy, Relevant Underlying or the Strategy Sponsor has not been, or will not be, obtained or has been, or will be, rejected, refused, suspended or withdrawn by the relevant competent authority or other relevant official body, in each case, with the effect that the issuer of, or one of the contracting parties in respect of, a Linked Product is not, or will not be permitted under any applicable law or regulation to use the Strategy or Relevant Underlying, as determined by the Strategy Sponsor (an “**Authorisation Event**”);
- (k) a material change in national or international financial, political, legal or economic conditions that would likely prejudice the calculation and publications of the value of a Strategy, as determined by the Strategy Sponsor;
- (l) the European Union membership or 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:
 - (I) the euro ceases to be the lawful currency of any member of the European Union; or
 - (II) 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 event;

then the Strategy Sponsor (or the Strategy Sponsor may instruct the Strategy Calculation Agent to), acting in good faith may determine in its sole discretion to take actions (each a “**Consequential Action**”) or take no action, with reference to preserving the intended commercial purpose of the Strategy (the “**Strategy Purpose**”), including, but not limited to, any or more of the following:

- (I) make such determinations or adjustments to the terms of a Strategy, including to the methodology and relevant data sources, as it deems appropriate to account for such Other Disruption Event and, as applicable, to the extent necessary to calculate the value of a Strategy in respect of such day (for which purpose it may use its own internal models and other market data sources as it reasonably determines is necessary and/or Input Data last published or made available by such Input Data Provider);
- (II) postpone any applicable rebalancing in whole or in part in respect of a Strategy or a Relevant Underlying (a “**Relevant Rebalancing**”) until such time or day on which no Other Disruption Event is continuing (the “**Relevant Deadline**”), and make any relevant adjustments to the methodology for calculating the Strategy that it deems appropriate to account for such postponement of the Relevant Rebalancing;
- (III) determine that the value assigned to the weight or unit (howsoever defined in the Strategy Description) in respect of the Relevant Underlying in respect of the period from (and including) the date on which such Other Disruption Event occurred to (but excluding) the Relevant Deadline shall remain at the value assigned to the Relevant Underlying immediately prior to the occurrence of such Other Disruption Event;
- (IV) suspend the publication of the value of a Strategy until such time as no Other Disruption Event is continuing;
- (V) publish an indicative value of the Strategy in respect of each business day on which an Other Disruption Event is continuing (and no official value of a Strategy in respect of such Strategy will be published);
- (VI) temporarily or permanently remove the affected Relevant Underlying at a price, value or amount determined by the Strategy Sponsor in a commercially reasonable manner and/or replace any affected Relevant Underlying where it considers in its sole discretion that a similar alternative is available; or
- (VII) terminate the calculation and publication of such Strategy.

(ii) **Disruption Events applicable to Input Data only**

Notwithstanding sub-paragraph (i) above, if the Strategy Sponsor discovers, or is notified by a party responsible for collecting, calculating, distributing or publishing an Input Data (the “**Input Data Provider**”, which may include a third party, the Strategy Sponsor itself or certain departments within the Goldman Sachs Group), that:

- (a) an Input Data Provider has ceased to publish such Input Data (or the Input Data Provider announces that it will cease to publish such Input Data) unless the Strategy Sponsor determines, in its sole and absolute discretion, that such Input Data has been replaced by any equivalent information or data;
- (b) there is a material change in the formula for or method of calculating, or the content or frequency of publication of, such Input Data (as determined by the Strategy Sponsor); or
- (c) the Input Data Provider (A) fails to calculate or publish such Input Data, (B) does not deliver such

Input Data to the Strategy Sponsor or Strategy Calculation Agent (as the case maybe) or (C) delivers incomplete Input Data to the Strategy Sponsor or Strategy Calculation Agent (as the case maybe), in each case, on or prior to the time at which the Strategy Sponsor needs to use such Input Data for calculating the value of the relevant Strategy,

(each an **"Input Data Disruption Event"**), then the Strategy Sponsor may, in its sole discretion determine to take actions or take no actions, including, but not limited to:

- (I) use the Input Data last published or made available by such Input Data Provider to calculate the value of the relevant Strategy; and/or
- (II) in all circumstances, (A) elect to temporarily or permanently replace or remove (or assign a zero weight to) the Component(s) affected by the unavailability or material change(s) to such Input Data from the relevant Strategy at the earliest possible opportunity as it determines to be commercially reasonable in order for the value of such Strategy to continue to be calculated notwithstanding the relevant circumstances, (B) use information or data from an alternative data source (which may be Internal Data (as defined in the section of these General Strategy Terms entitled *"Risk Factors"*)) which it determines to be comparable to such Input Data and to be appropriate in order to preserve the Strategy Purpose (and such information or data will be deemed to be the relevant Input Data for the purposes of such Strategy), (C) make such adjustment(s) to the Strategy Description or to the composition of such Strategy as it determines to be necessary, in its discretion and acting in a commercially reasonable manner, to reflect such unavailability or change(s) while aiming to preserve the Strategy Purpose or (D) 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 relevant Strategy, terminate the calculation and publication of such Strategy.

(iii) **Disruption Events applicable to a Component which is an index, as determined by the Strategy Sponsor (such Component, an "Index Strategy Component")**

- (a) If an Index Strategy Component (an **"Affected Index Strategy Component"**) is either:
 - (I) not calculated and announced by the relevant component's sponsor or calculation agent but is calculated and announced by a successor sponsor or successor calculation agent acceptable to the Strategy Sponsor; or
 - (II) replaced by a successor component using, in the determination of the Strategy Sponsor, the same or a substantially similar formula for and method of calculating that Index Affected Index Strategy Component,

then, in the case of paragraph (I) above, the Affected Index Strategy Component shall continue to be a Component, and, in the case of paragraph (II) above, such successor component (a **"Successor Index Strategy Component"**) will be deemed to become a Component and shall replace the Affected Index Strategy Component (such event, a **"Successor Index Strategy Component Event"**), and, in each case, the Strategy Sponsor may, acting in good faith, make such temporary or permanent adjustments to the terms and methodology of a Strategy as it deems appropriate in its sole discretion to account for such change (and such replacement and/or adjustment will be deemed to be effective as of the date determined by the Strategy Sponsor).

- (b) If in respect of an Index Strategy Component (including any such Component of which the Strategy Sponsor and/or any of its affiliates is the Component's sponsor) (a **"Sponsor Disrupted Index Strategy Component"**):

- (I) the Component's sponsor for such Sponsor Disrupted Index Strategy Component or the sponsor of any component of such Sponsor Disrupted Index Strategy Component announces that it will make a material change in the formula for or the method of calculating such Sponsor Disrupted Index Strategy Component (or any component thereof) or in any other way materially modifies such Sponsor Disrupted Index Strategy Component (or any component thereof) (other than such a modification prescribed, as of the inception date of a Component, in such formula or method (as may be specified in the Strategy Description) for the purpose of maintaining such Sponsor Disrupted Index Strategy Component (or such component thereof) in the event of changes to its composition);
- (II) such Sponsor Disrupted Index Strategy Component (or any component thereof) is permanently cancelled by its sponsor (or sponsor of such component thereof) without there being a Successor Index Strategy Component (or successor component thereof), or ceases to exist or is no longer tradable (each as determined by the Strategy Sponsor), including as a result of any member of the Goldman Sachs Group discontinuing an underlying strategy or index of which it is a sponsor;
- (III) such Sponsor Disrupted Index Strategy Component's sponsor (or sponsor of any component thereof) fails to calculate and announce the level of such Sponsor Disrupted Index Strategy Component (or such component thereof);
- (IV) in the reasonable judgment of the Strategy Sponsor, the level of such Sponsor Disrupted Index Strategy Component contains a manifest error; or
- (V) any authorisation, registration, recognition, endorsement, equivalence decision, approval or inclusion in any official register in respect of such Sponsor Disrupted Index Strategy Component or the administrator or sponsor of such Sponsor Disrupted Index Strategy Component has not been, or will not be, obtained or has been, or will be, rejected, refused, suspended or withdrawn by the relevant competent authority or other relevant official body, in each case, with the effect that the Strategy Sponsor is not, or will not be permitted under any applicable law or regulation to use such Sponsor Disrupted Index Strategy Component, as determined by the Strategy Sponsor,

then the Strategy Sponsor may determine, in its sole and absolute discretion, to take actions or take no action, including, but not limited to, the following:

- (A) temporarily or permanently remove the Sponsor Disrupted Index Strategy Component and/or select an alternative index to replace the Sponsor Disrupted Index Strategy Component (provided that the Strategy Sponsor shall use commercially reasonable efforts to select a replacement Component that it considers, in its sole and absolute discretion, to be a similar alternative), and may make such adjustments to the terms of a Strategy as may be necessary, in its commercially reasonable judgment to effect such change; or
- (B) calculate the level of such Sponsor Disrupted Index Strategy Component, in lieu of the published level for such Sponsor Disrupted Index Strategy Component, using the same formula for, and method of, calculating the level of such Sponsor Disrupted Index Strategy 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).

Strategy Sponsor (such Component, a "Futures Contract Strategy Component")

- (a) If, in respect of a Futures Contract Strategy Component (an "**Affected Futures Contract Strategy Component**"), any one or more of the following occurs:
- (I) it is not calculated or quoted by or traded on the relevant reference exchange (as determined by the Strategy Sponsor) but is calculated or quoted by and traded on a successor exchange acceptable to the Strategy Sponsor;
 - (II) it is replaced by a successor futures contract having, in the determination of the Strategy Sponsor, the same or substantially similar terms as that Affected Futures Contract Strategy Component,

then in the case of paragraph (I) above, the Affected Futures Contract Strategy Component shall continue to be a Futures Contract Strategy Component and, in the case of paragraph (II) above, such successor futures contract (a "**Successor Futures Contract Strategy Component**") will be deemed to become a Futures Contract Strategy Component and shall replace the Affected Futures Contract Strategy Component (such event, a "**Successor Futures Contract Strategy Component Event**") and, in each case, the Strategy Sponsor may, acting in reasonable manner and in good faith, make such temporary or permanent adjustments to the terms and methodology of a Strategy as it deems appropriate to account for such change (and such replacement and/or adjustment will be deemed to be effective as of the date determined by the Strategy Sponsor).

- (b) If, in respect of a Futures Contract Strategy Component (a "**Disrupted Futures Contract Strategy Component**"), any one or more of the following occurs:
- (I) any term of such Disrupted Futures Contract Strategy Component is: (A) changed or modified by the relevant reference exchange (including, without limitation, any change or modification in the contract specifications, the delivery or settlement date, the month of expiration, methodology for calculating the settlement price of such Disrupted Futures Contract Strategy Component, the rules and procedures governing the trading, the clearing, settlement and any other related matters of such Disrupted Futures Contract Strategy Component) or (B) otherwise subject to any order, ruling directive or law of any government agency or body;
 - (II) other than where the underlying asset in respect of such Disrupted Futures Contract Strategy Component is a commodity, the relevant contract reference price in respect of such Disrupted Futures Contract Strategy Component becomes a "limit price" in respect of any relevant day (meaning that the price of such Disrupted Futures Contract Strategy Component on the relevant day has increased or decreased from the previous day's settlement price for such Disrupted Futures Contract Strategy Component by the maximum amount permitted under the applicable rules of the relevant reference exchange such that no trades with respect to such Disrupted Futures Contract Strategy Component may be made at a different price);
 - (III) the relevant contract reference price in respect of such Disrupted Futures Contract Strategy Component remains at a "limit price" for five consecutive Strategy Calculation Days;
 - (IV) trading in such Disrupted Futures Contract Strategy Component (A) is suspended or interrupted subsequent to the open of trading on any relevant day, (B) never commences on any relevant day, (C) is permanently discontinued at any time or (D)

ceases to exist or is no longer tradable (as determined by the Strategy Sponsor), in each case, without there being a Successor Futures Contract Strategy Component, then the Strategy Sponsor may, in its sole and absolute discretion, acting in reasonable manner and in good faith, take no action or:

- (A) in respect of sub-paragraphs (II) and (IV) only, postpone any applicable rebalancing in whole or in part in respect of a Strategy or the Disrupted Futures Contract Strategy Component until such time or day on which no such Disruption Event is continuing and make any relevant adjustments to the methodology for calculating the Strategy that it deems appropriate to account for the postponement of such rebalancing;
 - (B) in respect of sub-paragraphs (I), (III) and (IV), take actions, including, but not limited to, the following:
 - (x) remove the Disrupted Futures Contract Strategy Component and/or select any futures contract (other than the Disrupted Futures Contract Strategy Component) to replace the Disrupted Futures Contract Strategy Component (provided that the Strategy Sponsor shall use commercially reasonable efforts to select a replacement Futures Contract Strategy Component that it considers, in its sole and absolute discretion, to be a similar alternative), and may make such adjustments to the terms of a Strategy as it deems appropriate to account for such removal and/or replacement; and
 - (y) amend, in the Strategy Sponsor's sole and absolute discretion, on either a permanent or temporary basis, the methodology used to determine which futures contract will constitute the relevant Futures Contract Strategy Component for the purposes of a Strategy while aiming to preserve the Strategy Purpose (and such replacement and/or adjustment will be deemed to be effective as of the date determined by the Strategy Sponsor); and
 - (C) in respect of sub-paragraphs (I) and (III) only, amend, in the Strategy Sponsor's sole and absolute discretion, on either a temporary or permanent basis, the methodology used to calculate the price or value of the relevant Disrupted Futures Contract Strategy Component for the purposes of the Strategy while aiming to preserve the Strategy Purpose.
- (v) **Disruption Events applicable to a Component which is a share, as determined by the Strategy Sponsor (such Component, a "Share Strategy Component")**

If, in respect of a Share Strategy Component, the Strategy Sponsor becomes aware of the occurrence of any one or more of the following events (each, a "**Trigger Event**"):

- (a) the adoption of, or change in, any applicable law or the promulgation of, or any change in, the interpretation of any applicable law, by a court, tribunal, regulatory authority with competent jurisdiction, and/or any relevant exchange, which, in each case, has resulted in a prohibition, restriction or any other adverse impact on short-selling with respect to a Share Strategy Component (whether having an impact for obtaining or offering synthetic exposure to short-selling, implementing a rebalancing in relation to such Share Strategy Component, or for acquiring, establishing, re-establishing, substituting, maintaining, unwinding, or disposing of any hedge position in relation to such Share Strategy Component);
- (b) any temporary or permanent suspension of, or limitation imposed on, trading by the reference exchange or any related exchange (as determined by the Strategy Sponsor) in respect of a

Share Strategy Component, including but not limited to, by reason of movement in price exceeding limits permitted by the relevant reference exchange or related exchange relating to such Share Strategy Component; or

- (c) (I) the adoption of, or announcement of, any change in, any applicable law, rule regulation, order, sanction, or directive of any governmental, administrative, legislative or judicial authority or power, in each case, relating to financial sanctions and embargo programmes, including but not limited to, any restrictions applicable to designated or blocked persons, as enacted, administered and/or enforced, from time to time, by the U.S. Department of the Treasury's Office of Foreign Assets Control, the U.S. Department of State, Her Majesty's Treasury Department of the United Kingdom, the United Nations, the European Union or other relevant authority (for the purposes of this paragraph (c), an "**Applicable Sanctions Law**"); or
- (II) the promulgation of, or any change in, the formal or informal interpretation of any Applicable Sanctions Law by a court, tribunal or regulatory authority with competent jurisdiction,

which, in either case, has resulted in any adverse impact on obtaining or offering synthetic exposure to a Share Strategy Component, implementing a rebalancing in relation to such Share Strategy Component, or for acquiring, establishing, re-establishing, substituting, maintaining, unwinding, or disposing of any hedge position in relation to such Share Strategy Component,

then the Strategy Sponsor may determine, in its sole and absolute discretion, to take actions or take no action, with reference to preserving the Strategy Purpose, including, but not limited to, any or more of the following:

- (A) to temporarily or permanently, exclude such Share Strategy Component affected by such Trigger Event from the Strategy and may make such adjustments to the terms and methodology of a Strategy as may be necessary, in its commercially reasonable judgment to effect such change. For avoidance of doubt, the Strategy Sponsor may determine (x) to apply such exclusion at or prior to the next scheduled rebalancing of the Strategy and (y) to re-designate such stock as a Component of the Strategy once such Trigger Event is no longer applicable to such Share Strategy Component; or
 - (B) make such determinations or adjustments to the terms of the Strategy, including to the methodology and relevant data sources, as it deems appropriate to account for such Trigger Event and, as applicable, to the extent necessary to calculate the value of the Strategy in respect of such day (for which purpose it may use its own internal models and other market data sources as it reasonably determines is necessary).
- (vi) **Disruption Events applicable to a Component which is an exchange traded fund (ETF), as determined by the Strategy Sponsor (such Component, an "ETF Strategy Component")**

In respect of an ETF Strategy Component (an "**Affected ETF Strategy Component**"):

- (a) paragraph (v) above shall apply to such Affected ETF Strategy Component, provided that:
 - (I) all references to "Affected Share Strategy Component" and "Share Strategy Component" shall be replaced with "Affected ETF Strategy Component" and "ETF Strategy Component" respectively; and
 - (II) it shall constitute a Trigger Event in respect of an Affected ETF Strategy Component if, in the determination of the Strategy Sponsor, the management company of the exchange

traded fund of an Affected ETF Strategy Component, or any other entity who has been delegated the responsibility to publish the net asset value of such Affected ETF Strategy Component, has failed to or will fail to, or has not published or will not publish, the net asset value of such Affected ETF Strategy Component, and such failure to publish or non- publication will, in the determination of the Strategy Sponsor, in its sole and absolute discretion, have a material effect on such Strategy and will be for more than a short period and/or will not be of a temporary nature; and

- (b) if at any time the index underlying the exchange traded fund of such Affected ETF Strategy Component and/or the terms and conditions governing the assets, contracts and instruments invested in or held by such exchange traded fund are changed in a material respect (as determined by the Strategy Sponsor), or if such exchange traded fund in any other way is modified so that it does not, in the opinion of the Strategy Sponsor, fairly represent the net asset value of such Affected ETF Strategy Component had those changes or modifications not been made, then, from and after that time, the Strategy Sponsor will make those calculations and adjustments as, in the good faith judgment of the Strategy Sponsor, may be necessary in order to arrive at a price of an exchange traded fund comparable to such exchange traded fund as if those changes or modifications had not been made, and calculate the closing prices with reference to such exchange traded fund, as adjusted. Accordingly, if such exchange traded fund is modified in a way that the price of its shares is a fraction of what it would have been if it had not been modified (for example, due to a split or a reverse split), then the Strategy Sponsor will adjust the price in order to arrive at a price of such Affected ETF Strategy Component as if it had not been modified (for example, as if the split or the reverse split had not occurred). The Strategy Sponsor also may determine that no adjustment is required by the modification of the method of calculation.

(vii) **Disruption Events applicable to a Component which is a currency exchange rate, as determined by the Strategy Sponsor (such Component, a "FX Strategy Component")**

If, in respect of a FX Strategy Component, any one or more of the following occurs (each a "**FX Disruption Event**"):

- (a) the occurrence or existence 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 or denominated currency in respect of such FX Strategy Component; or
- (b) a Currency Exchange Rate Disruption Event has occurred,

then the Strategy Sponsor may determine, in its sole and absolute discretion, to take one or more of the Consequential Actions listed in paragraph (i) above (or take no such action), with reference to preserving the Strategy Purpose (provided that each reference to a "Other Disruption Event" and "Relevant Underlying" shall be deemed to be a reference to "FX Disruption Event" and "FX Strategy Component" respectively).

Where "**Currency Exchange Rate Disruption Event**" means (and a Currency Exchange Rate Disruption Event shall be deemed to have occurred if), in respect of a FX Strategy Component and a relevant day:

- (i) such FX Strategy Component splits into dual or multiple currency exchange rates;
- (ii) an event has occurred in or affecting any relevant jurisdiction that generally makes it impossible to deliver (a) the Strategy Currency from accounts inside such jurisdiction to accounts outside

such jurisdiction or (b) the Strategy Currency between accounts inside such jurisdiction for such FX Strategy Component or to a party that is a non-resident of such jurisdiction;

- (iii) 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 applicable governmental authority (as defined below), 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 amount, interest, or other amounts due in respect of any such security, indebtedness, or guarantee without the consent of all holders of such obligation;
- (iv) it is or becomes impossible or not reasonably practicable for the Strategy Sponsor or any of its affiliates to obtain such FX Strategy Component from the source typically used for such FX Strategy Component, or to obtain a firm quote for such currency exchange rate;
- (v) any expropriation, confiscation, requisition, nationalization or other action by a relevant governmental authority occurs which deprives the Strategy Sponsor or any of its affiliates of all or substantially all of its assets in any relevant jurisdiction; or
- (vi) the FX Strategy Component and/or Strategy Currency, as the case may be, ceases to exist and is replaced by a new currency.

For these purposes:

- (A) 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; and
 - (B) "**governmental authority**" means 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 a reference country (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).
- (viii) **Disruption Events applicable to a Component which is an over-the-counter interest rate derivative transaction, as determined by the Strategy Sponsor (such Component, a "Swap Strategy Component")**

If, in respect of a Swap Strategy Component, any one or more of the following occurs (each a "**Swap Disruption Event**"):

- (a) any Input Data used to calculate (I) any relevant the swap rate in respect of such Swap Strategy Component, (II) the annuity in respect of such Swap Strategy Component or (III) any other data input which is used to determine the level of such Swap Strategy Component, is not published, calculated by or otherwise made available by both the relevant price source; or

- (b) it is or becomes impossible or not reasonably practicable for the Strategy Sponsor to obtain any relevant swap rate or annuity in respect of such Swap Strategy Component,

then the Strategy Sponsor may determine, in its sole and absolute discretion, to take one or more of the Consequential Actions listed in paragraph (i) above (or take no such action), with reference to preserving the Strategy Purpose (provided that each reference to a "Other Disruption Event" and "Relevant Underlying" shall be deemed to be a reference to "Swap Disruption Event" and "Swap Strategy Component" respectively).

(ix) **Disruption Events applicable to a Component which is an options contract (which, for the avoidance of doubt, could reference any type or class of underlying instrument or asset), as determined by the Strategy Sponsor (such Component, an "Options Contract Strategy Component")**

- (a) If, in respect of an Options Contract Strategy Component (an "**Affected Options Contract Strategy Component**"), any one or more of the following occurs:

- (I) it is not calculated or quoted by or traded on the relevant reference exchange (as determined by the Strategy Sponsor) but is calculated or quoted by and traded on a successor exchange acceptable to the Strategy Sponsor;
- (II) it is replaced by a successor options contract having, in the determination of the Strategy Sponsor, the same or substantially similar terms as that Affected Options Contract Strategy Component,

then in the case of paragraph (I) above, the Affected Options Contract Strategy Component shall continue to be an Options Contract Strategy Component and, in the case of paragraph (II) above, such successor options contract (a "**Successor Options Contract Strategy Component**") will be deemed to become an Options Contract Strategy Component and shall replace the Affected Options Contract Strategy Component (such event, a "**Successor Options Contract Strategy Component Event**") and, in each case, the Strategy Sponsor may, acting in reasonable manner and in good faith, make such adjustments to the terms of a Strategy as it deems appropriate to account for such change (and such replacement and/or adjustment will be deemed to be effective as of the date determined by the Strategy Sponsor).

- (b) If, in respect of an Options Contract Strategy Component (a "**Disrupted Options Contract Strategy Component**"), any one or more of the following occurs:

- (I) any term of such Disrupted Options Contract Strategy Component is: (A) changed or modified by the relevant reference exchange (including, without limitation, any change or modification in the contract specifications, the delivery or settlement date, the month of expiration, methodology for calculating the settlement price of such Disrupted Options Contract Strategy Component, the rules and procedures governing the trading, the clearing, settlement and any other related matters of such Disrupted Options Contract Strategy Component) or (B) otherwise subject to any order, ruling directive or law of any government agency or body;
- (II) the relevant price in respect of the underlying instrument or asset in respect of such Disrupted Options Contract Strategy Component becomes a "limit price" in respect of any relevant day (meaning that the price of such underlying instrument or asset on the relevant day has increased or decreased from the previous day's price for such underlying instrument or asset by the maximum amount permitted under the applicable rules of the relevant reference exchange such that no trades with respect to such

- Disrupted Options Contract Strategy Component may be made at a different price);
- (III) the relevant price in respect of the underlying instrument or asset in respect of such Disrupted Options Contract Strategy Component remains at a “limit price” for five consecutive Strategy Calculation Days;
 - (IV) trading in such Disrupted Options Contract Strategy Component (A) is suspended or interrupted subsequent to the open of trading on any relevant day, (B) never commences on any relevant day, (C) is permanently discontinued at any time, (D) ceases to exist or is no longer tradable (as determined by the Strategy Sponsor), in each case, without there being a Successor Options Contract Strategy Component;
 - (V) the Strategy Sponsor, in its reasonable judgment, (I) determines that such Disrupted Options Contract Strategy Component has ceased to be a liquid, actively traded option contract that is generally available for trading or (II) anticipates that such Disrupted Options Contract Strategy Component, notwithstanding that it is available for trading, will cease to be a liquid and actively traded option contract or will be terminated or delisted by the relevant price source,

then the Strategy Sponsor may, in its sole and absolute discretion, to take actions or take no action, including, but not limited to, the following:

- (A) remove the Disrupted Options Contract Strategy Component and/or select any options contract (other than the Disrupted Options Contract Strategy Component) to replace the Disrupted Options Contract Strategy Component (provided that the Strategy Sponsor shall use commercially reasonable efforts to select a replacement Options Contract Strategy Component that it considers, in its sole and absolute discretion, to be a similar alternative), and may make such adjustments to the terms of a Strategy as it deems appropriate to account for such removal and/or replacement;
 - (B) amend, in the Strategy Sponsor’s sole and absolute discretion, on either a permanent or temporary basis, the methodology used to calculate the value of Disrupted Options Contract Strategy Component for the purposes of the Strategy while aiming to preserve the Strategy Purpose;
 - (C) other than in respect of sub-paragraph (II), amend, in the Strategy Sponsor’s sole and absolute discretion, on either a permanent or temporary basis, the methodology used to determine which options contract will constitute the relevant Options Contract Strategy Component for the purposes of a Strategy while aiming to preserve the Strategy Purpose (and such replacement and/or adjustment will be deemed to be effective as of the date determined by the Strategy Sponsor); or
 - (D) in respect of sub-paragraph (II) only, postpone any applicable rebalancing in whole or in part in respect of a Strategy or the Disrupted Options Contract Strategy Component until such time or day on which no such Disruption Event is continuing and make any relevant adjustments to the methodology for calculating the Strategy that it deems appropriate to account for the postponement of such rebalancing.
- (x) **Disruption Events applicable to an “Intraday Strategy” (being a Strategy for which the parameter “Intraday Strategy” is stated to be “Applicable” in the applicable Strategy Description), as determined by the Strategy Sponsor**

Intraday Strategies typically use or reference intraday fixings, quotes or prices of various types (including, but not limited to, TWAPs, VWAPs and fixings, quotes or prices observed (and/or time stamped) at specified

intraday times) as part of its Input Data. Typically, those intraday fixings, quotes or prices will be observed or computed by the Strategy Calculation Agent using real time data or values (“**Intraday Data**”) available to it as of the time of calculation, sourced from exchanges, data vendors or other data sources as specified in the Strategy Description.

The Strategy Calculation Agent will use commercially reasonable efforts to ensure the availability and accuracy of Intraday Data. Due to the additional complexity and operational risks associated with the timely computation, technical implementation and risk management of Linked Products referencing Intraday Strategies, the following provisions shall apply to Intraday Strategies.

If, in respect of an Intraday Strategy, the Strategy Sponsor determines that the Strategy Sponsor or an Affiliate is unable:

- (a) prior to a relevant period of time (which may be an observation window or an execution window) to determine the hedges required to be executed by the Strategy Sponsor or an Affiliate in relation to its exposure to such Intraday Strategy; or
- (b) to access any relevant financial market, trading venue or exchange to execute such hedges, including internal trading and order entry systems;

in each case due directly or indirectly to the quality or unavailability of Intraday Data or failures in internal systems and/or data/risk processes, then the Strategy Sponsor may determine, in its sole and absolute discretion, to take actions or take no action, including but not limited to the following:

- (I) suspend the publication of the value of an Intraday Strategy until such time as the issue is resolved;
- (II) choose not to update, restate or correct any of these intraday calculations or end of day levels to account for such issue;
- (III) compute the value of an Intraday Strategy by reference to the affected Intraday Data;
- (IV) compute the value of an Intraday Strategy by reference to the relevant prices, levels, notionals and quantities at which the Strategy Sponsor or its affiliates have executed the relevant hedge transactions in lieu of the prices, levels, notionals and quantities specified in the Strategy Methodology;
- (V) deem an “Asset Level Sample” (as such term may be specified in the relevant Strategy Methodology) to be “not defined” for the purpose of the applicable Strategy Methodology and to compute the applicable Execution Fraction (as such term may be specified in the relevant Strategy Methodology) accordingly; and/or
- (VI) suspend the synthetic execution of new transactions within the Intraday Strategy until such time as the issue is resolved.

Investors should note that an Intraday Strategy may be a component of a wider basket or combination of other Strategies or Components, some of which may specify “Intraday Strategy” to be “Not Applicable”. For the avoidance of doubt, any such statement that Intraday Strategy is “Not-Applicable” in a Strategy Description applies only to that Strategy and Investors should read and understand the disclosure applicable to each individual Strategy that forms part of such basket or combination.

The Disruption Events in this paragraph (x) shall not apply where “Intraday Disruption Provisions” are stated to be “Not Applicable” in the relevant Strategy Description.

RESTATEMENTS OF INPUT DATA

Further information on the policies and procedures of the Strategy Sponsor in relation to the handling of errors, incidents and restatements in respect of any Strategy can be found at the following location: <https://www.goldmansachs.com/disclosures/euro-benchmark-reg-iosco-principles-for-financial-benchmarks-f/summary-of-gs-policy-on-global-benchmark-incident.pdf> (or any successor page).

ADJUSTMENT EVENTS

In the event of any inconsistency between the provisions of this "Adjustment Events" section and the provisions of any relevant General Description, Specifications Annex and/or Other Documentation Element in respect of a Strategy, the provisions of the relevant General Description, Specifications Annex and/or Other Documentation Element shall prevail for the purposes of such Strategy.

For the purposes of these General Strategy Terms, a "**Strategy Calculation Agent Methodology Strategy**" means a Strategy that is calculated in accordance with the policies and practices of a third party strategy calculation agent or a third party's corporate action methodology (as further described in the Strategy Description) (such methodology being the "**Strategy Calculation Methodology**" in respect of the relevant Strategy), including, for the avoidance of doubt, where the Strategy Calculation Agent is a third party not affiliated with the Strategy Sponsor.

Strategy Calculation Agent Methodology Strategies

In respect of a Strategy Calculation Agent Methodology Strategy, following the determination by the Strategy Calculation Agent that (and each of below constitutes an "**Adjustment Event**" for the purpose of General Strategy Terms):

- (a) a Share Strategy Component or ETF Strategy Component (each an "**Affected Strategy Component**") has commenced trading ex-dividend in respect of an ordinary cash dividend (such dividend an "**Ordinary Dividend**" and such date, an "**Ex Day**");
- (b) an Extraordinary Event (as defined below) has occurred in respect of an Affected Strategy Component; or
- (c) a Potential Adjustment Event (as defined below) has occurred in respect of an Affected Strategy Component or following any adjustment to the settlement terms of listed options or futures contracts on such Affected Strategy Component traded on an options or futures exchange,

then, unless otherwise specified in the Strategy Description, the Strategy Calculation Agent will adjust the value of the Strategy in accordance with such Strategy Calculation Agent Methodology in respect of such Strategy Calculation Agent Methodology Strategy to account the occurrence of such event or circumstance.

Ordinary Dividends and Ex Days

In respect of a Strategy that is not a Strategy Calculation Agent Methodology Strategy, following the determination by the Strategy Sponsor that an Affected Strategy Component has commenced trading ex-dividend in respect of an Ordinary Dividend, the Strategy Sponsor will determine the applicable dividend amount per share of such Affected Strategy Component net of an Assumed Tax Rate, as set out below (the "**Net Dividend Amount**"). Following such determination, the Strategy Sponsor will adjust the Strategy on or around the Ex Day with the aim of reflecting the economic effect of such Net Dividend Amount (as determined by the Strategy Sponsor acting in good faith and a commercially reasonable manner).

In the event that the dividend amount, dividend type or the Ex Day of a dividend is adjusted in respect of an Affected Strategy Component on any day after an Ex Day, the Strategy Sponsor may make further adjustments to the Strategy.

The Strategy Sponsor will determine in respect of each relevant Affected Strategy Component and Ex Day, based on its view of applicable law and/or regulations, observable sources and/or market practice, an assumed tax rate ("**Assumed Tax Rate**") which is intended to reflect the withholding tax rate levied, or the potential tax rate that may be levied by the country of incorporation or residence of the issuer of such Affected Strategy Component.

Extraordinary Events and Corporate Actions

In respect of a Strategy that is not a Strategy Calculation Agent Methodology Strategy:

- (a) following the determination by the Strategy Sponsor that an Extraordinary Event has occurred in respect of an Affected Strategy Component the Strategy Sponsor may in respect of such Affected Strategy Component in its sole and absolute discretion:
 - (I) determine the appropriate adjustment, if any, to be made to one or more determinations under such Strategy as the Strategy Sponsor determines appropriate to account for the Extraordinary Event and determine the effective date of that adjustment. The relevant adjustments may include, without limitation, adjustments to account for changes in volatility, expected dividends, stock loan rate or liquidity relevant to such Affected Share Strategy Component; or
 - (II) remove the Affected Strategy Component and/or select an alternative Component to replace the Affected Strategy Component and make such adjustments to the terms of a Strategy as it deems appropriate to account for such removal; and
- (b) following the determination by the Strategy Sponsor that a corporate action has occurred in respect of an Options Contract Strategy Component, the Strategy Sponsor may, in respect of such Options Contract Strategy Component, in its sole and absolute discretion, determine the appropriate adjustment, if any, to be made to one or more determinations, calculations or values in respect of such Options Contract Strategy Component and determine the effective date of the adjustment(s). The Strategy Sponsor may, but need not, determine the appropriate adjustment(s) by reference to (amongst other things) the adjustment(s) in respect of such corporate action made by exchanges (including, but not limited to, the reference exchange for such Options Contract Strategy Component) or announcements made by The Options Clearing Corporation (OCC).

The following terms shall have the following meanings:

"Extraordinary Event" means, in respect of:

- (I) a Share Strategy Component, each of a Delisting, an Insolvency, a Merger Event, a Nationalisation and a Tender Offer, or any analogous circumstances, as determined by the Strategy Sponsor or Strategy Calculation Agent (as applicable) in its sole and absolute discretion; and
- (II) an ETF Strategy Component, each of a Delisting, an Insolvency, a Merger Event, a Nationalisation and a Tender Offer;

"Delisting" means, in respect of an Affected Strategy Component, the reference exchange (as determined by the Strategy Sponsor or Strategy Calculation Agent (as applicable)) announces that pursuant to the rules of such reference exchange, such Affected Strategy Component ceases (or will cease) to be listed, traded, or publicly quoted on such reference exchange for any reason (other than a Merger Event or Tender Offer) and are not immediately re-listed, re-traded, or re-quoted on an exchange or quotation system located in the same country as such reference exchange (or, where such reference exchange is within the European Union, in a member state of the European Union);

"Insolvency" means that by reason of the voluntary or involuntary liquidation, bankruptcy, insolvency, dissolution, or winding-up of or any analogous proceeding affecting the issuer of an Affected Strategy Component, (I) all such Affected Strategy Component is required to be transferred to a trustee, liquidator, or other similar official or (II) holders of such Affected Strategy Component become legally prohibited from transferring them;

"Merger Event" means, in respect of an Affected Strategy Component, any of the following:

- (I) a reclassification or change of such Affected Strategy Component that results in a transfer of, or an irrevocable commitment to transfer all such Affected Strategy Component outstanding to another entity

or person;

- (II) a consolidation, amalgamation, merger, or binding share exchange of the issuer of such Affected Strategy Component with or into another entity or person (other than a consolidation, amalgamation, merger, or binding share exchange in which such issuer is the continuing entity and which does not result in a reclassification or change of all of such Affected Strategy Component outstanding);
- (III) a takeover offer, tender offer, exchange offer, solicitation, proposal, or other event by any entity or person to purchase or otherwise obtain 100 per cent. (100%) of the outstanding Affected Strategy Component that results in a transfer of, or an irrevocable commitment to transfer, all such Affected Strategy Component (other than such Affected Strategy Component owned or controlled by such other entity or person); or
- (IV) a consolidation, amalgamation, merger, or binding share exchange of the issuer of such Affected Strategy Component or its subsidiaries with or into another entity in which such issuer is the continuing entity and which does not result in a reclassification or change of all such Affected Strategy Component outstanding but results in the outstanding Share Strategy Component (other than such Affected Strategy Component owned or controlled by such other entity) immediately prior to such event collectively representing less than 50 per cent. (50%) of the outstanding Affected Strategy Component immediately following such event;

"Nationalisation" means that all the Affected Strategy Component or all or substantially all the assets of the issuer of such Affected Strategy Component are nationalised, expropriated, or are otherwise required to be transferred to any governmental agency, authority, entity, or instrumentality thereof;

"Tender Offer" means a takeover offer, tender offer, exchange offer, solicitation, proposal, or other event by any entity or person that results in such entity or person purchasing, or otherwise obtaining, or having the right to obtain, by conversion or other means, greater than 10 per cent. (10%) and less than 100 per cent. (100%) of the outstanding voting shares of the issuer of an Affected Strategy Component, as determined by the Strategy Sponsor or Strategy Calculation Agent (as applicable), based upon the making of filings with governmental or self-regulatory agencies or such other information as the Strategy Sponsor or Strategy Calculation Agent (as applicable) determines to be relevant.

Potential Adjustment Event

In respect of a Strategy that is not a Strategy Calculation Agent Methodology Strategy, following the determination by the Strategy Sponsor that a Potential Adjustment Event has occurred in respect of an Affected Strategy Component or following any adjustment to the settlement terms of listed options or futures contracts on such Affected Strategy Component traded on an options or futures exchange, the Strategy Sponsor will determine whether such Potential Adjustment Event or adjustment to the settlement terms of listed options or futures contracts on such Affected Strategy Component traded on an options or futures exchange has a diluting or concentrative effect on the theoretical value of such Affected Strategy Component and, if so, will:

- (i) make the corresponding adjustment, if any, to one or more determinations under a Strategy, as the Strategy Sponsor determines appropriate to account for that diluting or concentrative effect (provided that adjustments may be made to account solely for changes in volatility, expected dividends, stock loan rate, or liquidity relative to such asset), including (but not limited to) an adjustment to level in respect of such Affected Strategy Component or an adjustment to the level of the Strategy and/or its composition; and
- (ii) determine the effective date of such adjustment.

The Strategy Sponsor may, but need not, determine the appropriate adjustment by reference (amongst other things) to the adjustment in respect of such Potential Adjustment Event made by other equity market dealers

and/or exchanges (including but not limited to the reference exchange for such Affected Strategy Component, and options and futures exchanges related to such Affected Strategy Component) or quoting services.

"Potential Adjustment Event" means, in respect of an Affected Strategy Component, any of the following:

- (i) a subdivision, consolidation or reclassification of the relevant Affected Strategy Component (unless resulting in a Merger Event) or a free distribution or dividend of any such Affected Strategy Component to existing holders of such Affected Strategy Component by way of bonus, capitalisation, or similar issue;
- (ii) a distribution, issue or dividend to existing holders of the relevant Affected Strategy Component of (a) such Affected Strategy Component, (b) other share capital or securities granting the right to payment of dividends and/or the proceeds of liquidation of the issuer of such Affected Strategy Component equally or proportionately with such payments to holders of such Affected Strategy Component, (c) share capital or other securities of another issuer acquired or owned (directly or indirectly) by the issuer of such Affected Strategy Component as a result of a spin-off or other similar transaction or (d) any other type of securities, rights, or warrants, or other assets, in any case for payment (in cash or in other consideration) at less than the prevailing market price, all as determined by the Strategy Sponsor;
- (iii) an extraordinary dividend;
- (iv) a declaration or public announcement that any dividend that was previously declared as payable in respect of such Affected Strategy Component has been cancelled or will otherwise not be payable;
- (v) a call by the issuer of such Affected Strategy Component in respect of such Affected Strategy Component that are not fully paid;
- (vi) a repurchase by the issuer of such Affected Strategy Component or any of its subsidiaries of such Affected Strategy Component whether out of profits or capital and whether the consideration for such repurchase is cash, securities, or otherwise;
- (vii) in respect of the issuer of such Affected Strategy Component, an event that results in any shareholder rights being distributed or becoming separated from shares of common stock or other shares of the capital stock of such issuer pursuant to a shareholder rights plan or arrangement directed against hostile takeovers that provides upon the occurrence of certain events for a distribution of preferred stock, warrants, debt instruments, or stock rights at a price below their market value, as determined by the Strategy Sponsor, provided that any adjustment effected as a result of such an event shall be readjusted upon any redemption of such rights; or
- (viii) any other event having a diluting or concentrative effect on the theoretical value of the relevant Affected Strategy Component, as determined by the Strategy Sponsor.

AVAILABILITY AND PUBLICATION OF STRATEGY VALUES AND TERMINATION OF A STRATEGY

Unless otherwise specified in the relevant Strategy Description, the Strategy Calculation Agent will generally calculate and make available the value of a Strategy in respect of each Strategy Calculation Day.

On any Strategy Calculation Day in respect of which a Disruption Event (as defined in the section of these General Strategy Terms entitled "*Disruption Events and Consequences*", or otherwise specified in the relevant General Description, Specifications Annex and/or Other Documentation Element) has occurred in respect of a Strategy, the Strategy Calculation Agent may still make available a value of a Strategy in respect of such Strategy Calculation Day. However, in such event, such value of a Strategy may be indicative and only for information purposes and may not reflect a value at which the Strategy Sponsor or its affiliates would be willing to issue or trade any products linked to such Strategy.

Strategy Values: The value of a Strategy in respect of a Strategy Calculation Day will be published on the following data sources:

- (i) on <https://marquee.gs.com> (or any successor page) (the "**Strategy Publication Data Source**"); and/or
- (ii) on such other information sources as the Strategy Sponsor may select from time to time at its sole and absolute discretion.

To the extent that rounding is applicable to a Strategy in accordance with the terms of the relevant Strategy Description, each value of a Strategy will be published to the number of significant figures set out in the relevant Strategy Description.

Information about the past performance of a Strategy can be obtained at the Strategy Publication Data Source.

Miscellaneous: As soon as reasonably practicable upon changing or amending the methodology relating to such Strategy in accordance with the section of these General Strategy Terms entitled "*Change in Strategy Methodology*", the Strategy Sponsor will post details of such determination, change or amendment to the Strategy Publication Data Source. Any notices in respect of a Strategy (including, without limitation, any notice in respect of a restatement of a Strategy) will be published on the Strategy Publication Data Source.

Any investor in a Linked Product who does not have access to the Strategy Publication Data Source may obtain information published there from the Systematic Trading Strategies (STS) Department of Goldman Sachs International.

Any publication described in this section of these General Strategy Terms entitled "*Availability and Publication of Strategy Values and Termination of a Strategy*" may be restricted by means determined appropriate for such purpose by the Strategy Sponsor or Strategy 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 Strategy Sponsor or Strategy Calculation Agent and such persons.

The Strategy Sponsor may, at any time, for any reason, and without notice, change the Strategy Publication Data Source or the data source on which any value of a Strategy is published and/or change the frequency of publication of the value of a Strategy, in its sole and absolute discretion.

The Strategy 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 Strategy), and without notice, terminate the calculation and publication of a Strategy.

The Strategy Sponsor and the Strategy Calculation Agent accept no liability to any person for publishing or not continuing to publish for any period of time any value of a Strategy on any particular data source or any particular time.

CHANGE IN STRATEGY METHODOLOGY

1. Change in Methodology

Except as provided in this section of these General Strategy Terms entitled "*Change in Strategy Methodology*", the Strategy Calculation Agent will, subject as provided below, employ the methodology described in the Strategy Description with respect to calculating and determining the value of a Strategy and the determining weights of any Components respectively, and its application of such methodologies shall (in the absence of manifest error) be conclusive and binding.

While the Strategy Calculation Agent expects to employ the methodology described in the Strategy Description (the "**Strategy Methodology**") at all times to calculate and determine the value of a Strategy and determining the weights of any Components respectively, it is possible that market, legal, regulatory, judicial, financial, fiscal or other circumstances (including, but not limited to (i) any event that impairs or is expected to impair the market liquidity of transactions relating to a Component, (ii) any changes to or any suspension or termination of or any other events affecting a Strategy and/or any Component, as the case may be or (iii) any other events affecting the ability of an Input Data Provider to supply the necessary Input Data for purposes of calculating the value of a Strategy or events affecting the availability of Input Data relating to Components) will arise that would, in the view of the Strategy Sponsor, necessitate or make desirable a modification or change of such Strategy Methodology in order to preserve the Strategy Purpose (including, without limitation, in order to increase the transparency of the Strategy Description (as determined by the Strategy Sponsor)).

The Strategy Sponsor reserves the right to make any other changes to the composition of a Strategy or to the Strategy Methodology or to any third party data source used to calculate the value of a Strategy as the Strategy 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 Strategy Sponsor shall be entitled to make modifications and/or changes to the Strategy Methodology, the composition of the Strategy (including the Components) or to any Input Data obtained from an Input Data Provider which is used to calculate the value of a Strategy 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 Strategy Description;
- (ii) to cure, correct or supplement any ambiguity or contradictory or defective provision contained in the Strategy Description;
- (iii) to change the frequency of calculation of the value of a Strategy and to make such adjustment to the Strategy 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 Strategy Calculation Agent to continue calculating and determining the value of a Strategy and determining the weights of any Component respectively if market, legal, regulatory, judicial, financial, fiscal or other circumstances arise which were not reasonably foreseeable by the Strategy Sponsor as of the date of the relevant Strategy Description and which have not been deliberately caused by the Strategy Sponsor and such circumstances would prevent the Strategy Calculation Agent from calculating and determining the value of a Strategy and determining the weights of any Components or any signal respectively, and would necessitate a modification or change of the methodology described in the Strategy Description in order for the value of a Strategy to continue to be calculated and determined notwithstanding the relevant circumstances;
- (v) to permit the Strategy Sponsor and/or the Strategy Calculation Agent to continue calculating and determining the value of a Strategy and determining the weight(s), signal(s) or other values or parameters in respect of any Component in anticipation of, or as a result of (A) the cessation of any

benchmark, including but not limited to any inter-bank offered interest rates (each an “**Affected Rates Benchmark**”), (B) any change or adjustment announced or implemented by clearing houses or exchanges with respect to an Affected Rates Benchmark (including, but not limited to, any discounting convention or premium of a financial instrument) or (C) when such Affected Rates Benchmark, as determined by the Strategy Sponsor, becomes no longer reliable and representative of market or economic reality that such Affected Rates Benchmark is intended to measure;

- (vi) to preserve the Strategy Purpose where such modification and/or change is of a formal, minor or technical nature;
- (vii) to increase the transparency of the Strategy Description (as determined by the Strategy Sponsor in its sole discretion); and/or
- (viii) to preserve the Strategy Sponsor’s or its affiliates’ ability to hedge the relevant Strategy, Components and/or Input Data and maintain such Strategy as tradable and replicable.

The Strategy Sponsor may also specify in the relevant Strategy Description if it foresees any additional circumstances that it may deem necessary or appropriate to make any changes to the Strategy or to the Strategy Methodology.

In the event that an ambiguity or contradictory or defective provision comes to the attention of the Strategy Sponsor and/or the Strategy Calculation Agent in the calculation of the value of a Strategy, the Strategy Sponsor and/or the Strategy Calculation Agent may, in accordance with its own policies and procedures applicable at the time, resolve such ambiguity or contradictory or defective provision and, if necessary for resolution, make such changes to the composition of such Strategy or the methodology of calculating such Strategy. In the event that the Strategy Sponsor or the Strategy Calculation Agent (as applicable) determines that any calculation or determination in respect of any Strategy is incorrect, the Strategy Sponsor or the Strategy Calculation Agent (as applicable) shall review such calculation or determination in accordance with its policies and procedures applicable at the relevant time (which may result in such calculation or determination being corrected). In the event of any conflict between any such determination of the Strategy Sponsor and the Strategy Calculation Agent, the determination by the Strategy Sponsor shall prevail.

2. Strategy Oversight

The Strategy Sponsor has a committee (the “**Strategy Committee**”) which provides overall oversight of activities related to the development, issuance and operation of each Strategy. The Strategy Committee consists of representatives from Goldman Sachs’ front office who may be involved in the design and/or hedging of Strategies and control functions but does not include representation from external stakeholders. The Strategy Committee, amongst other things (i) serves as the oversight function for the purposes of Article 5 of the Benchmarks Regulation⁵ of members of the Goldman Sachs Group acting as “administrators” (as such term is defined in the Benchmarks Regulation) under the Benchmarks Regulation and (ii) maintaining oversight of and approving the exercise of discretion or expert judgment by the Strategy Sponsor to a Strategy, including determinations required following disruption events or adjustment events, changes to embedded costs and amendments to the calculation methodology.

Notwithstanding the foregoing, in making any such modifications described above, the Strategy Sponsor will ensure that such modifications or changes will result in a methodology that is consistent with the Strategy

⁵ Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending directives 2008/48/EC and 2014/17/EU and Regulation (EU) 596/2014 (as may be amended or replaced from time to time).

Purpose. However, each of the Strategy Sponsor and the Strategy Calculation Agent do not owe any person any fiduciary duties in respect of a Strategy and are not required to take the interests of any person into account in making any such modifications with respect thereto.

In respect of a Strategy, the Strategy Sponsor may, but is not required to, establish any additional consultation group (the "**External Consultation Group**"). The External Consultation Group, if established, will comprise employees of the Strategy Sponsor and at least an equal number of external members with a relevant academic or professional background, as selected by the Strategy Sponsor in its sole and absolute discretion. The Strategy Calculation Agent may from time to time consult with the External Consultation Group on matters of interpretation with respect to the methodology of a Strategy. For the avoidance of doubt, the External Consultation Group, if established, will not have greater powers than the Strategy Sponsor at any time.

This section of the General Strategy Terms entitled "*Strategy Oversight*" is subject to, and qualified by, Goldman Sachs International's benchmark statements (the "**GSI Benchmark Statements**") and a summary of its Securities Division Global Benchmark Policy and Control Framework (the "**Framework**") which can be accessed via the following link: <https://www.goldmansachs.com/disclosures/euro-benchmark-reg-iosco-principles-for-financial.html> (or any successor page thereto).

3. Capacity Limit of a Strategy

If the aggregate notional amount of Linked Products (or products or transactions linked to any other Strategy which is sponsored by the same Strategy Sponsor and which use a similar methodology as such Strategy) exceeds a certain threshold (as determined by the Strategy Sponsor by reference to the ability and capacity of the Strategy Sponsor and its affiliates to be able to effectively hedge its exposure to such Strategy and the liquidity impact of such hedging on the relevant markets, then the Strategy Sponsor may (a) change the methodology in respect of a Strategy so that the rebalancing of the Strategy is executed over one or more additional days and/or adjust the frequency in which the rebalancing of the Strategy occurs, (b) replace the Strategy with a replacement Strategy which will be identical in all material respects other than the day or days on which the Strategy is rebalanced, (c) make such other adjustments to the Strategy, in each case, in order to enable the Strategy Sponsor and its affiliates to effectively hedge its exposure to the Strategy and/or reduce the expected liquidity impact of such hedging transactions in relevant markets and/or (d) if such Strategy is an actively managed strategy, the Strategy Sponsor may, notwithstanding all rebalancing conditions in respect of a proposed rebalancing request being satisfied and if so specified in the Strategy Description, reject such proposed rebalancing request that would, if implemented, change the quantity or weight of certain components in the Strategy. No modifications, replacement or changes proposed as a result of this paragraph shall result in a Strategy that is inconsistent with the Strategy Purpose. Any such changes or actions will be announced as promptly as is reasonably on the Strategy Publication Data Source. Any holder or counterparty of any Linked Product who requires further information regarding any element of the foregoing should contact the Systematic Trading Strategies (STS) Department of Goldman Sachs International.

4. Amendments to notional costs in respect of a Strategy

The Strategy Sponsor, acting in a reasonable manner and in good faith, and subject to any applicable conditions and restrictions if being so specified in the relevant Strategy Description, shall have the right, but not the obligation, to increase or decrease any of the notional costs in respect of a Strategy, in each case if the Strategy Sponsor determines, in its sole and absolute discretion, that the costs that a hypothetical investor would incur in investing in, rebalancing, maintaining positions in, or synthetically replicating the performance of, transactions or positions linked to the Strategy or Components have increased or decreased (as the case may be). The Strategy Sponsor is not required to take the interests of any person into account in determining whether or not to exercise such right and does not owe any person any fiduciary duties in respect thereof.

5. Amendments to the "Adjustment Events" section above

Investors in Linked Products should note that the Strategy Sponsor may replace or amend from time to time the methodology contained in the “Adjustment Events” section of these General Strategy Terms (including, without limitation, by the creation of a new methodology to determine corporate actions and the relevant adjustments).

HEDGING ACTIVITIES AND NOTIONAL COSTS OF A STRATEGY

1. Hedging activities in relation to a Strategy

The Strategy Sponsor and/or any affiliate in its capacity as issuer of, or counterparty to, Linked Products (a "**Hedging Party**") may hedge its exposure or potential or expected exposure to the Strategy, Linked Products and the Components (and their components) with an affiliate or a third party. A Hedging Party may make significant returns on this hedging activity independently of the performance of the Strategy or any Component, including in scenarios where the levels at which it executes its hedges are different from the levels specified in the methodology for determining the value of the Strategy (or otherwise where such Hedging Party does not hedge all of its exposure to the Strategy).

Any returns on a Hedging Party's hedging activity will not be passed on to investors in Linked Products, and such investors will not have any rights in respect of a Hedging Party's hedge positions including but not limited to any shares, ETFs, futures, options, commodities, currencies or other financial instruments. Where a Hedging Party, in accordance with its internal policies, executes hedging activity by trading in components of the Strategy (or other similar strategies) on or before the related rebalancing day, such trading may have an adverse impact on the level at which the Components are rebalanced (which may result in an adverse impact on the performance of the Strategy). Such hedging activity, and the size of such impact, will be linked to the amount of new and outstanding Linked Products at the relevant time.

Additionally, members of the Goldman Sachs Group may generate revenues if they execute their hedging activity at different levels from those used to determine the value of the Strategy or used for the rebalancing of the Strategy. Such hedging activity could generate significant returns to members of the Goldman Sachs Group that will not be passed on to investors in any Linked Product.

2. Notional costs of a Strategy

Notional embedded costs may be included within a Strategy that will generally reduce the level of such Strategy. Any such amounts will be deducted from the performance of a Strategy with the intention of reflecting synthetically one or more of (i) the cost of maintaining exposure to, and replicating performance of, each Component (such costs are applicable on an ongoing basis for such time as the Strategy maintains exposure to the relevant Component and are often referred to as servicing costs), (ii) the cost of entering into and/or unwinding transactions relating to a Component following each rebalancing of the Components in the Strategy (such costs are made only as a result of a rebalancing of a Strategy and are often referred to as transaction costs) and/or (iii) strategy deduction amounts (which are applicable to a Strategy rather than the Components and are applicable on an ongoing basis at either a continuous fixed rate or for such time as the value of the Strategy is greater than zero). The costs referred to in (i) and (ii) above may vary for each Component. These embedded costs will generally reduce the value of such Strategy. In addition, the value of a Strategy may be reduced by further deductions if so specified in the relevant Strategy Description.

Each Component and the underlying components thereof may also embed notional cost deductions, the effect of which is to reduce the value of the Component or component thereof, as applicable. Such notional costs deductions are intended to reflect, synthetically, certain costs incurred in respect of such Component (or component thereof, as applicable) as described in the documentation of the relevant Component or underlying component thereof (as applicable). Any such deductions from the value of a Component or underlying component thereof generally have the effect of reducing the value of the relevant Strategy.

Investors in Linked Products should note that the actual costs of entering into, unwinding and/or maintaining such transactions or positions may be lower or higher than the synthetic costs set out in the Strategy Description and, if they were lower, the effect of these deductions would be to the benefit of a Hedging Party in its capacity as issuer of, or counterparty to the Linked Products. In general, it is expected that such actual costs will be lower in each case than the synthetic costs in the Strategy.

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 Strategies.

POTENTIAL INVESTORS SHOULD REFER TO THE RELEVANT GENERAL DESCRIPTION, SPECIFICATIONS ANNEX AND/OR OTHER DOCUMENTATION ELEMENT IN RESPECT OF EACH STRATEGY FOR SPECIFIC CONFLICTS OF INTEREST RELATING TO SUCH STRATEGY.

Overview of the Roles of the Goldman Sachs Group

The Goldman Sachs Group may have multiple roles in connection with the Strategies:

- (i) If Goldman Sachs International is the Strategy Calculation Agent, Goldman Sachs International is responsible for calculating and publishing the value of a Strategy in its capacity as Strategy Calculation Agent and for making certain determinations in respect of such Strategy from time to time in its capacity as Strategy Sponsor.
- (ii) The Strategies are designed by, and are operated in accordance with, a methodology developed by Goldman Sachs International. Among other things, Goldman Sachs International created the parameters within which each Strategy operates. The Strategy Sponsor does not have any obligation to ensure that the Strategy Calculation Agent continues to calculate and publish the value of a Strategy. Except in the limited circumstances set out in the relevant Strategy Description, Goldman Sachs International does not generally exercise any discretion in relation to the operation of each Strategy. Goldman Sachs International owes no fiduciary duties in respect of such Strategy.
- (iii) The Goldman Sachs Group is a full-service financial services group and, consequently, is engaged in a range of activities that could affect the value of a Strategy, as the case may be, and any Component positively or negatively as further described below.
- (iv) The Goldman Sachs Group members may be sponsors and/or calculation agents of one or more Components and in that capacity have the power to make determinations that could materially affect the value of such Strategy.
- (v) The Goldman Sachs Group may from time to time have a direct or indirect ownership interest in any Strategy Calculation Agent (or any other calculation agent with respect to a Strategy or Component) and any third party data providers with respect to a Strategy or any Component (including, without limitation, any Input Data Provider).

Potential Conflicts of Interest

Potential conflicts of interest may arise in relation to Goldman Sachs' multiple roles in connection with the Strategy. Although the Goldman Sachs Group will perform its obligations in a manner that it considers commercially reasonable, it may face conflicts between the roles it performs in respect of a Strategy and its own interests. In particular, the Goldman Sachs Group 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 Strategy, Linked Products, any Component, any Input Data and/or investments referenced by or linked to any Component or Input Data and may exercise remedies or take other action with respect to its interests as it deems appropriate. These actions could adversely affect the value of a Strategy and may include the following:

- (i) The Goldman Sachs Group actively trades Linked Products, any Component, Input Data, investments referenced by or linked to a Component or Input Data and numerous related investments. These activities could adversely affect the value of a Strategy, which could in turn affect the return on, and the value of, Linked Products.

- (ii) The Goldman Sachs Group may have access to information relating to a Strategy, Linked Products, a Component, Input Data or investments referenced by or linked to a Component or Input Data. The Goldman Sachs Group is not obliged to use that information for the benefit of any person acquiring or entering into any Linked Products.
- (iii) Certain activities conducted by the Goldman Sachs Group may conflict with the interests of those acquiring any Linked Products. It is possible that the Goldman Sachs Group could receive substantial returns in respect of these activities while the value of any investment referenced to such Strategy may decline. For example:
 - (a) The Goldman Sachs Group and other parties may issue or underwrite additional securities or trade other financial or derivative instruments or investments referenced to a Strategy or other similar strategies or any Component. An increased level of investment and trading in these securities, instruments or investments may negatively affect the performance of a Strategy and could affect the value of such Strategy and, therefore, the amount payable at maturity (or on any other payment date) on any Linked Products and the value of such Linked Products before such date. Such securities, instruments or investments may also compete with any Linked Products. By introducing competing products into the marketplace in this manner, the Goldman Sachs Group could adversely affect the market value of any Linked Products and the amount paid by it on such products at maturity (or on any other payment date). To the extent that the Goldman Sachs Group serves as issuer, agent, underwriter or counterparty in respect 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 or counterparty in respect of any Linked Products.
 - (b) Although the Goldman Sachs Group is not obliged to do so, it may elect to hedge its exposure to a Strategy, any Linked Products, a Component, Input Data or any investment referenced by or linked to a Component or Input Data with an affiliate or a third party. That affiliate or third party, in turn, is likely to directly or indirectly hedge some or all of its exposure, including through transactions taking place on the futures and options markets. Where the Goldman Sachs Group chooses to hedge its exposure, it may adjust or unwind such hedges by purchasing or selling any Linked Products, a Component, Input Data, any investments referenced by or linked to a Component or Input Data or any other product on or before the date such Strategy is valued for purposes of any investments referenced to such Strategy. The Goldman Sachs Group may also enter into, adjust or unwind hedging transactions relating to other instruments linked to a Strategy or a Component including at times and/or levels which are different from those used to determine the value of a Strategy. Any of this hedging activity may adversely affect the value of a Strategy and the value of any products linked to such Strategy. In addition, and without limitation:
 - (I) The Goldman Sachs Group could receive substantial returns with respect to these hedging activities while the value of a Strategy and/or the value of any Linked Product may decline.
 - (II) If the Goldman Sachs Group has hedged its exposure to a Component and/or Input Data and incurs an effective rate of withholding tax that is less than the synthetic tax withholding applied in respect of a Strategy, the Goldman Sachs Group could receive substantial returns.
 - (III) The Goldman Sachs Group could receive substantial returns if it trades in a Component on or before the rebalancing of a Strategy and/or at levels which are different from the

levels specified in the methodology for determining the value of a Strategy. Such trading may have an adverse impact on the level at which a rebalancing occurs, which may result in an adverse impact on the performance of a Strategy. In addition, such trading could generate significant returns to the Goldman Sachs Group that will not be passed on to the investors in any Linked Products.

- (c) Certain activities conducted by the Goldman Sachs Group may conflict with the interests of those acquiring any Linked Products. For example, as described above, the Goldman Sachs Group may elect to hedge its obligations, if any, with an affiliate or a third party. It is possible that the Goldman Sachs Group could receive substantial returns with respect to these activities irrespective of the performance of such Strategy and including while the value of any investment referenced to a Strategy may decline.
- (d) The Goldman Sachs Group 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 Linked Products, a Component (or any constituent thereof), Input Data and/or any investment referenced by or linked to a Component (or any constituent thereof) or Input Data. In the course of these transactions, the Goldman Sachs Group's customers may receive information about a Strategy before it is made available to other investors. Any of these activities could also adversely affect the value of a Strategy directly or indirectly by affecting the level of a Component (or any constituent thereof), Input Data or the investments referenced by or linked to a Component (or any constituent thereof) or Input Data and, therefore, the market value of any Linked Products and the amount paid on any such product at maturity.
- (iv) As operator or sponsor of a Strategy, under certain circumstances Goldman Sachs International will have discretion in making various determinations that affect a Strategy and any Linked Products including, but not limited to, those situations described in the relevant Strategy Description. Goldman Sachs International may use these determinations to calculate how much cash it must pay at maturity, or, as the case may be, upon any early redemption or on any other payment date, of any Linked Product, including products issued by the Goldman Sachs Group members. The exercise by Goldman Sachs International of this discretion could adversely affect the value of such Strategy and the value of any Linked Product. 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 Goldman Sachs Group'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 Linked Products, the Components and/or Input Data thereof or any investment referenced by or linked to such Components and/or Input Data.
- (v) As operator or sponsor of one or more Components (or as an Input Data Provider), the Goldman Sachs Group members may be entitled to exercise discretion over decisions that would have an adverse impact on the value of a Strategy, including, without limitation, discontinuing publication of the level of one or more Components and/or Input Data. The Goldman Sachs Group members will exercise any such discretion without regard to any Strategy or investors in any Linked Products.
- (vi) The Goldman Sachs Group may in the future create and publish other indices or strategies, the concepts of which are similar, or identical, to that of a Strategy or one or more of the Components. The Components as specified in the Strategy Description for such Strategy, however, are the only components that will be used for the calculation of the Strategy. Accordingly, no other published indices should be treated by any investor as the level of any Component (except as the Strategy

Sponsor or the Strategy Calculation Agent may so determine, as described above).

- (vii) The Goldman Sachs Group may publish research, express opinions or provide recommendations (for example, with respect to a Component) that are inconsistent with investing in products linked to such 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 Component and could affect the value and or performance of such Strategy or of products linked to such Strategy.
- (viii) The Goldman Sachs Group may have ownership interests in sponsors of Components and as such may be able to influence the methodology and other features of such Components. In addition, members of the Goldman Sachs Group may provide pricing or other data that is directly used in the calculation of the level, value, coupon and/or components of Components (or the components thereof) or may be an Input Data Provider. The activities of the Goldman Sachs Group members as contributor to any Components or Input Data Providers may be adverse to the interests of investors and/or counterparties to products linked to any such Components or Input Data and may have an impact on the performance of such Components and/or Input Data.
- (ix) The Goldman Sachs Group may have ownership interests in the Strategy Calculation Agent (or any other calculation agent with respect to a Strategy or Component) and any third party data providers (including, without limitation, any Input Data Provider) with respect to a Strategy or any Component or Input Data and as such may be able to influence the determinations of such the Strategy Calculation Agent or other calculation agent. In addition, members of the Goldman Sachs Group may provide pricing or other data that is directly used in the calculation of the level, coupon and/or components of the Strategy or may be Input Data Providers. The activities of the Goldman Sachs Group members as contributor to any Strategy may be adverse to the interests of investors and/or counterparties to products linked to any such Strategy and may have an impact on the performance of such Strategy.

RISK FACTORS

Risk factors relating a synthetic investment in the Strategies are set out below. This section does not purport to describe all of the risks associated with a synthetic investment in the Strategies. Risk factors in relation to a transaction or product which is linked to the performance of the Strategies may also be set out in the relevant documents in respect of such transaction or product. In addition, potential investors should refer to the relevant General Description, Specifications Annex and/or Other Documentation Elements in respect of each Strategy and each of its Components for specific risk factors relating to such Strategy, such Components and any relevant Input Data.

(A) GENERAL RISK FACTORS

Investors in a Strategy could lose their entire investment

The value of a Strategy depends on the performance of the Components, each of which may increase or decrease in value. Neither a Strategy nor any of the Components includes any element of capital protection or guaranteed return. The value of any Component, or a Strategy itself, may fall below its initial value.

If a floor is not specified to be applicable in respect of a Strategy or Component, then the value of that Strategy or Component may fall below zero and have a negative value. In this case an investment linked to a “long” Strategy may incur losses which exceed the notional value of such investment.

If a floor is specified to be applicable in respect of a Strategy or Component, then the value of that Strategy or Component may not fall below zero. If the value of that Strategy or Component falls to zero, unless otherwise specified in the Strategy Description, such value will remain at zero and any investment linked solely to such Strategy may have lost all of its value, in which case there will be no chance of such investment thereafter recovering.

Changes in market structure and/or increased investment in similar products may negatively affect the value of a Strategy

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 Strategy or any Component, the underlying market or economic characteristics that such Strategy or 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 Strategy and such Strategy will not be adjusted to take account of any such changes.

Unless otherwise specified in the relevant Strategy Description, a Strategy is not actively managed

Unless otherwise specified in the relevant Strategy Description, each Strategy will be operated in accordance with the methodology set forth in the Strategy Description and, in particular, any weight or quantity assigned to a Component on any relevant rebalancing day shall be determined by applying an algorithm operating within pre-determined rules. There will be no active management of a Strategy so as to enhance returns beyond those embedded in a Strategy.

Market participants are often able to 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 Strategy. In contrast, the algorithm for a Strategy will rebalance the weights or quantities to their specified values on each relevant rebalancing day. No assurance can be given that a Strategy will replicate or outperform a comparable strategy which is actively managed and the return on a Strategy may be lower than the return on an actively managed strategy.

An investment in a Strategy may be subject to leverage, which may increase the risk in such investment

A Strategy's absolute overall exposure to the Components may be greater or less than 100%.

If the sum of the absolute weights of the Components is greater than 100 per cent., the Strategy will employ leverage. In the current instance, leverage means that a Strategy will have increased exposure to changes, which may be positive or negative, in the value of the Components, magnifying the volatility and risk. The performance of the Strategy will be adversely affected should the value of "long" Components decrease and/or the value of "short" Components increase (as the case may be).

If the sum of the absolute weights of the Components is less than 100 per cent. the Strategy will have a reduced participation to the Components and may underperform as compared to a Strategy where the exposure was greater.

The actual weights of Components may vary following each rebalancing

The actual weight of each of the Components following each rebalancing may be different than the initially assigned weights of each of the Components, and therefore the relative contribution of each Component to the overall value of a Strategy may vary from time to time, depending on the performance of each of the Components relative to the other 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 Components, and the Strategy may therefore have an exposure to a Component further below or in greater excess of its previously 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 Components and increase the overall risk profile of the Strategy.

Certain costs in respect of the Strategy may be a function of third-party data at any time and, as such, are variable (and are floored, but not capped)

The costs that are deducted from a Strategy in respect of any relevant day may be determined by reference to (among other things) data from one or several Input Data Providers for such day. Accordingly, such cost will vary as a result of changes in the relevant data over time. While such costs for any relevant rebalancing day are subject to a minimum amount (or "floor"), the Strategy methodology may not apply any maximum amount (or "cap") to such for any relevant rebalancing day. Therefore, in such circumstances, the Strategy may not perform as well as a strategy for which such costs are fixed or calculated by reference to fixed values, or otherwise are subject to a fixed cap.

The Strategy Sponsor could significantly increase the costs that are deducted from a Strategy in prescribed circumstances

Under certain market conditions or otherwise in accordance with the circumstances or terms specified in the relevant Strategy Description, the Strategy Sponsor may determine to increase the costs that are deducted from the Strategy, and there may be no fixed limits on the levels of these costs. If specified in the relevant Strategy Description, such increases may be made unilaterally by the Strategy Sponsor, may be significant and may be made without taking into account the interests of any investors in Linked Products. Although this determination is constrained by the procedure described in the relevant Strategy Description, it is possible that the increased cost may be significantly greater than the levels originally assigned to them and may apply for an extended period of time (even if, where relevant and applicable, the period of such market conditions that originally necessitated such increase in costs only lasts for a short period of time). This could materially adversely affect the performance and value of a Strategy.

Excess return strategies will often underperform total return strategies

A Strategy which is calculated on an "excess return" basis is the excess return version of one or more total return strategies. To determine the value of an excess return strategy, the performance of the total return

strategy 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 strategies will often be less than the performance of the equivalent total return strategy.

Total return strategies may exhibit excess return characteristics

A Strategy which is calculated on a “total return” basis may include Components which are calculated on an excess return basis. In such case even though the Strategy is calculated on a total return basis it will exhibit characteristics of an excess return version.

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

Alternative investments such as Linked Products 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 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 any issuer of such Linked Product make any representation or warranty, express or implied, that a Strategy will do so in the future.

Furthermore, it should be noted that the results that may be obtained from investing in any Linked Product or otherwise participating in any Linked Product might well be significantly different from the results that could theoretically be obtained from a direct investment in the Component(s) or any related derivatives.

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

Past performance of a Strategy is no guide to future performance. It is impossible to predict whether the value of a Strategy will rise or fall. The actual performance of a Strategy over the life of any Linked Product as well as the amount payable at maturity or settlement may bear little relation to the historical levels of the Strategy.

An investor in a Strategy will have no rights in respect of any Component(s)

The investment exposure provided by a Strategy is purely synthetic. An investment referenced to a Strategy will therefore not make an investor a holder of or give an investor a direct or indirect purchase or other acquisition or assignment of any interest or a direct investment position in, any Component (or any components thereof). As such, the risks and returns of a notional investment in a Strategy may differ significantly from a cash investment in any Component (or component thereof).

A Strategy may provide short exposure to one or more of the Components

A Strategy may specify that the weight of a Component may be less than zero, i.e. a short position in such Component. A short position in a Component means that a Strategy will have negative exposure to such Component and the value of such Strategy will be negatively affected if the value of such Component should increase and positively affected if the value of such Component should decrease. Therefore, investors should be aware that an investment in a Linked Product may decline in value in a period, even if the value of such Component increases during that timeframe. Further, given that short positions may create exposure to uncapped losses, increases in the value of such Component could result in a decrease in the value of such Strategy that is greater than the weight in respect of such Component and may result in the value of such Strategy falling to zero or even to a negative value.

An investment in a Strategy may be subject to dilution, which may limit the gains in such investment

A Strategy may be subject to dilution, such that investors in any Linked Products may not benefit fully from increases or decreases (depending on whether the exposure is long or short) in the value of a Component.

Dilution means that the return or loss on an investment is subject to a multiplier decreasing exposure to such investment and reducing the volatility and risk of loss should the value of such investment decline but reducing the potential gain should the value of such investment increase. Investors should be aware that if the value of a Component increases or decreases, an investment in a Linked Product may not have the same magnitude of increased or decreased value as the Component.

Correlation of performances among the Components may reduce the performance of a Strategy

Performances of the Components of a Strategy 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 Components. High correlation during periods of negative returns among the Components may have an adverse effect on the level of a Strategy.

The negative performance of one or more Components in a Strategy may outweigh the positive performance of other Components in such Strategy

The value of a Strategy will go up or down depending on the overall performance of each of Component in a Strategy. The negative performance of one or more positively weighted Components in a Strategy (and/or the positive performance of one or more negatively weighted Components in a Strategy) may outweigh the positive performance of other positively weighted Components in a Strategy (and/or the negative performance of one or more negatively weighted Components in a Strategy). Even in the case of a positive performance of one or more Components in a Strategy, the value of the Strategy as a whole may go down if the performance of the other Components is negative to a greater extent.

Components assigned a weight or quantity of zero will not contribute to the value of a Strategy

Some Components may be assigned a weight or quantity of zero in respect of a rebalancing day and, in such case, the relevant Strategy shall not have any exposure to such Component until the next rebalancing day (if any) on which such Components are assigned a non-zero weight or quantity. As a result, any changes in the performance of such Components will not affect the value of the Strategy for the relevant period following such rebalancing day.

A Strategy may not be a fully diversified portfolio

Diversification is generally considered to reduce the amount of risk associated with an investment. A Strategy may be concentrated in a particular asset class or sector and there can be no assurance that a Strategy will be sufficiently diversified at any time to reduce or minimise risks of volatility. The more concentrated the Strategy is in certain asset classes or sectors, the greater degree of volatility the Strategy may exhibit, and this could in turn result in an adverse effect on the returns of the Strategy.

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 Strategy.

Prices in relevant underlying indices, financial instruments or assets constituted in a Component may be volatile

The value of a 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 programmes, political and economic events and rates of inflation, currency devaluations and revaluations, and sentiment in the relevant market. This may make the value of a Component volatile, which may in turn make the value of a Strategy volatile.

At any given time, the component stock universe of the Strategy may include underliers that are on the “restricted trading list” of Goldman Sachs, and that may adversely affect the Strategy’s performance.

As part of its activities as a full-service global financial institution, Goldman Sachs may from time to time place companies on its internal “restricted trading list” (the “RTL”). If so specified in the relevant Strategy Description, where a company is placed on the RTL as a result of a potential restriction on Goldman Sachs’ ability to principally transact in the stock or options of such company, its shares may be disqualified as a member of the component stock universe of the Strategy upon such company being placed on the RTL (which, for the avoidance of doubt, could occur at any time notwithstanding any prior acceptance of, or the initiation of a determination or process in respect of, the shares of any such company in accordance with the terms of the Strategy Description). This disqualification may adversely affect the performance of the Strategy.

Notionally embedded costs in respect of a Component may not be fixed, but are a function of one or more reference assets (which will vary, perhaps materially, with market conditions and over time)

If the Strategy includes certain notionally embedded costs in respect of Components in the Strategy methodology, such costs will reduce the value of the Strategy. If so specified in the relevant Strategy Description, such costs or rates may not be fixed rates but, in respect of any Component, are dependent on the value or performance of one or more reference assets (which may include third party volatility indices or credit indices) on prescribed dates. While such costs are subject to a minimum amount (or “floor”), the Strategy Description may not apply any maximum amount (or “cap”) to such costs for any relevant day.

Such performance and, therefore, the corresponding cost rate in respect of a Component, will vary from time to time with market conditions, perhaps materially so. In particular, the relevant costs rates are expected to be higher during periods of high market volatility than during periods of low market volatility – and, as a result, may be higher during periods in which the Strategy performs poorly. Accordingly, the amount by which the value of the Strategy is reduced at any time by the application of the relevant cost rates will vary from time to time and, during periods where such rate is increased, will have a greater negative impact on the value of the Strategy as compared to a fixed synthetic transaction cost rate or costs calculated by reference to fixed values (or otherwise being subject to a cap). Such variation may result in the aggregate synthetic transactions costs deducted from the value of the Strategy being higher (perhaps materially so) on any future date, or over any future period, as compared to historical periods.

As some Components may not be denominated in the currency of the Strategy, a Strategy may be subject to currency exchange rate risks

Each Strategy is calculated in a particular currency (the “Strategy Currency”). While some of the Components may be denominated in the Strategy Currency, a Strategy may also comprise Components denominated in other currencies. A Strategy may therefore be exposed to currency exchange rate risks. The impact on the value of a Strategy will depend on the extent to which these other currencies, if any, strengthen or weaken against the Strategy Currency and the relative weight of each such other currency represented in the Strategy. 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 Strategy may have an internal simulated currency hedge feature in respect of one or more of its Components denominated in another currency, if so specified in the relevant Strategy Description. Through a series of synthetic transactions, the internal simulated currency hedge feature, if applicable, seeks to offset a portion of the positive or negative effects of currency exchange rate fluctuations in such other currency on the values of such Component. However, a Strategy's internal simulated currency hedge feature will prove ineffective if, and to the extent that, the performance of the relevant money markets and of such Component move in opposite directions or move in the same direction but to a different extent. As a result of such movements, investors in such Strategy will still be subject to the risk of currency fluctuations affecting the value of such Strategy. In addition, as the currency hedged levels of such Component are based on the performance of synthetic cash deposits, the internal simulated currency hedge feature, if applicable, is unlikely to replicate a return exactly equal or similar to the return such Component that would be available to an investor whose investment currency is the same as that of such Component.

Strategy Inception Date and Back-testing

The Strategy Sponsor will designate a “**Strategy Inception Date**”, on which the value of the Strategy is equal to the “**Strategy Initial Value**” (each as specified in the relevant Strategy Description). The levels of a Strategy in the period from such Strategy Inception Date, to a date on which Linked Products are first implemented (being the “**Strategy Launch Date**”) (which may be materially later than the Strategy Inception Date of such Strategy) will be calculated on the basis of back-tested data (“**Back-testing**”).

Levels in respect of a Strategy for such period are hypothetical and are calculated at or around the Strategy Launch Date in accordance with the relevant Strategy Description 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 such Strategy.

If such historical data was available or complete, or if different sources or values were used in such Back-testing, the levels of a Strategy for such period would be different, potentially materially so. Accordingly, such Strategy levels may not reflect the performance of, and are no guarantee or assurance in respect of the performance or returns of, such 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.

A Strategy may have a limited operating history and may perform in unanticipated ways

A Strategy has only been calculated since the relevant Strategy Inception Date and, therefore, there is no historical performance data available prior to such date. Additionally, there may only be limited historical performance data with respect to the Components referenced by such Strategy and the Strategy itself, any investment in respect of which returns are linked to the performance of a Strategy or its 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 Strategy and on which to base an investment decision, the fact that a Strategy and the Components are relatively new would not allow this. There can be no guarantee or assurance that a Strategy

or its Components will operate in a manner consistent with the data available.

Some Strategy parameters are partially based on simulated data

Some parameters of a Strategy may have been determined by reference to simulated time series data which start before the Strategy Inception Date for such Strategy. 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 Strategy and this difference may be material. The future performance of a Strategy will depend, among other things, on the choice of the parameters as described in the relevant Strategy Description. As such, the performance of such Strategy could be materially different if the relevant parameters were determined based on the actual performance of such Strategy rather than based on simulated time series data.

A Strategy may be subject to a Disruption Event

If a Disruption Event occurs or is continuing in respect of a Strategy, the Strategy Sponsor may make (or the Strategy Sponsor may instruct the Strategy Calculation Agent to make) certain adjustments in respect of such Strategy and which may include, amongst other things, any adjustments to the methodology and relevant data sources in order to calculate the value of such Strategy, a postponement of any relevant rebalancing or the suspension of the publication of the value of such Strategy. If the Strategy Sponsor or Strategy Calculation Agent (as applicable) makes any adjustments to the methodology and relevant data sources or postpones any relevant rebalancing, it is likely that the value of the Strategy will be different from what it would have been if such Disruption Event had not occurred, and it may vary unpredictably and could be lower.

Changes in the Components or Input Data may affect the value of a Strategy

Where a Component or Input Data ceases to exist or is no longer tradable, including as a result of a Goldman Sachs Group member discontinuing a Component of which it is a sponsor or discontinuing to act as an Input Data Provider, or where the Strategy Sponsor would be prevented from entering into transactions in respect of a Component (including one for which a Goldman Sachs Group member is the sponsor) or Input Data by any applicable law or regulation, the Strategy Sponsor may (but is not obliged to) substitute another Component and/or Input Data for the original one where it considers in its sole discretion that a similar alternative is available. Any such substitution or assignment could alter the exposure provided by a Strategy and materially affect the performance and value of such Strategy.

As Strategy Sponsor and Strategy Calculation Agent of a Strategy, Goldman Sachs International has the authority to make determinations that could materially affect a Strategy and create conflicts of interest

As the Strategy Sponsor and Strategy Calculation Agent, Goldman Sachs International does not generally exercise any discretion in relation to the operation of a Strategy. Goldman Sachs International owes no fiduciary duties in respect of a Strategy or any Linked Products.

Goldman Sachs International may, however, exercise discretion in certain limited situations including, but not limited to, the occurrence of a Disruption Event in respect of each Strategy (as more particularly described in the relevant Strategy Description). Determinations made by Goldman Sachs International as the Strategy Sponsor and Strategy Calculation Agent could adversely affect the value of such Strategy or any Linked Product 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 of these General Strategy Terms entitled "*Conflicts of Interest*". In making those determinations, the Strategy Sponsor and/or the Strategy Calculation Agent will not be required to, and will not, take the interests of any investor of any such Linked Product into account or consider the effect its determinations will have on the value of such a Linked Product. All determinations made by the Strategy

Sponsor and/or the Strategy Calculation Agent shall be at its sole discretion and shall be conclusive for all purposes and will bind all holders of any Linked Product. The Strategy Sponsor and/or the Strategy Calculation Agent shall not have any liability for such determinations.

A Strategy may be changed or become unavailable which may result in the adjustment or termination of Linked Products

Subject as provided in the sections of these General Strategy Terms entitled “*Disruption Events and Consequences*” and “*Change in Strategy Methodology*” above, the Strategy Sponsor shall have the right to alter the methodology used to calculate a Strategy or to discontinue the publication of the value of a Strategy in certain circumstances (including, without limitation, following the occurrence of an Authorisation Event or any other Disruption Event). A permanent cancellation of a Strategy or a failure by the Strategy Sponsor to calculate or announce the value of a Strategy may constitute a disruption event in respect of, and, therefore, may result in a decrease in the value of or return on any Linked Product (or result in the termination or early redemption of a Linked Product). Any changes may be made without regard to the interests of a holder of any Linked Product.

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

As sponsors of Components, or as Input Data Providers, Goldman Sachs Group members have the authority to make determinations that could materially affect a Strategy and create conflicts of interest

Goldman Sachs Group members may also act as sponsor of one or more Components or as Input Data Providers in respect of a Strategy. In that capacity, each of them has the power to make certain determinations that could materially affect the value of such Components and/or Input Data Providers and, in turn, the value of such Strategy, and the exercise by each such member of its discretion in its capacity as sponsor of such Components or as Input Data Providers could present it with a conflict of interest of the kind described in described in the section of these General Strategy Terms entitled “*Conflicts of Interest*”.

Potential amendment to the methodology of a Strategy or replacement of a Strategy to enable the Strategy Sponsor and/or any affiliate to be able to effectively hedge its exposure to the Strategy and to reduce the impact of such hedging transactions on the relevant markets

If the Strategy Sponsor determines that the aggregate notional or principal amount of Linked Products is above a certain threshold it may (a) change the methodology in respect of a Strategy so that the rebalancing of the Strategy is executed over one or more additional business days or that the frequency of rebalancing of the Strategy is changed, (b) replace the Strategy with a replacement Strategy which will be identical in all material respects other than the day or days on which the Strategy is rebalanced and/or (c) make such other adjustments to the Strategy, in each case, in order to enable the Strategy Sponsor and/or any affiliate to be able to effectively hedge its exposure to such Strategy and/or to reduce the expected impact of such hedging transactions on the relevant markets. Although such amendments or such replacement would be designed to minimise potential market impact, the performance of the Strategy may be affected by such amendments or replacement, potentially materially so.

Trading and other transactions by the Goldman Sachs Group could materially affect the value of any Linked Product

The Goldman Sachs Group is a full-service financial services firm engaged in a range of market activities. Goldman Sachs Group may issue, arrange for the issue of, or enter into financial instruments referenced to, a Strategy or any of the Components of such Strategy 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 a Strategy and/or any of its Components and may present the Goldman Sachs Group with a conflict of interest of the kind described in the section of these General Strategy Terms entitled "*Conflicts of Interest*".

Information provided by the Goldman Sachs Group about the value of any Component may not be indicative of future performance

Any information about the performance of any Component provided by the Goldman Sachs Group will be or has been furnished as a matter of information only, and an investor in a Linked Product 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 Strategy.

Information about a Strategy may only be available through the Goldman Sachs Group

The Goldman Sachs Group may not provide holders of any Linked Product with further information in relation to the relevant Strategy beyond what is provided in the relevant Strategy Description, and further information may not be generally available. The Goldman Sachs Group has entered into non-exclusive licensing agreements with certain Input Data Providers in order to source the necessary Input Data to calculate each Strategy. The formalities necessary to obtain access to such figures may deter potential investors from buying a Linked Product on the secondary market.

The Strategy Sponsor and the Strategy 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 Strategy Sponsor and the Strategy Calculation Agent may affect the value of a Strategy

The Strategy Sponsor and the Strategy Calculation Agent may rely upon third party brokers or external dealers and other external and internal sources (including, without limitation, Input Data Providers) to obtain certain inputs necessary to compute the value of a Strategy and/or to determine the weights or quantity of the Components which may be inaccessible and/or inaccurate and the inputs used by them to compute the value of a Strategy may affect the value of such Strategy. Investors considering acquiring or making an investment in a Linked Product should carefully read and understand the information about such Components and Input Data.

The inability of the Strategy Calculation Agent to source necessary data to calculate the relevant formulae of a Strategy may affect the value of such Strategy. In addition, the Strategy Sponsor and the Strategy Calculation Agent (i) make no warranty as to the correctness or completeness of that information and take no responsibility for the accuracy of such data or the impact of any inaccuracy of such data on the value of a Strategy and (ii) are not under any obligation or currently intend to independently verify such third party information or data from any third party data source or to advise any investor in any Linked Product of any inaccuracy, omission, mistake or error of which it 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 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 to incorporate any such correction or revision into the calculation of the value of the Strategy or the level of any Component.

Linked Products 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 Components. In addition, no assurance can be given that any model or methodology used by such suppliers or sources will have a positive effect on the performance of the Strategy. Therefore, the Strategy may not perform

as well as a strategy using alternative data sources or data sources with a different model or methodology.

Sponsors of Components have authority to make determinations that could materially affect a Strategy

Determinations that the sponsors of the Components of a Strategy, including Goldman Sachs Group members, may make in connection with the composition, calculation and maintenance of the Components may materially affect the value of the Components and could, in turn, adversely affect the value of such Strategy. Those sponsors have no obligation to take the interests of the Strategy Sponsor or any holders of any Linked Product 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 Components have licensed, and may continue to license, such 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 Components, which could adversely affect the value of a Strategy.

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

The decisions and policies of the Strategy Sponsor concerning the calculation of a Strategy could affect the value of such Strategy and, therefore, the amount payable on any Linked Product on the stated maturity date of such Linked Product (or on any other payment date) and the market value of such Linked Product before that date. The amount payable on any Linked Product 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 such Strategy, or if the Strategy Sponsor discontinues or suspends calculation or publication of such Strategy, in which case it may become difficult to determine the market value of such Linked Product. If such policy changes relating to a Strategy or the calculation or publication of a Strategy is discontinued or suspended, the calculation agent of any Linked Product (which may be Goldman Sachs International) may have discretion in determining the level of such Strategy on the relevant determination date and the amount payable on such Linked Product.

The policies of a sponsor and changes affecting a Component could affect the Strategy and its value

The policies of a sponsor concerning the calculation of the value of a Component, or additions, deletions or substitutions of Components and the manner in which changes affecting the Components could affect the value of a Component and, therefore, the value of such Strategy and any Linked Product. The value of a Strategy 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 Component, or if the sponsor discontinues or suspends calculation or publication of the value of the Component, in which case it may become difficult to determine the value of a Strategy.

A Strategy relies on the use of third-party information

With respect to any Components and/or Input Data not sponsored by any member of the Goldman Sachs Group, a Strategy methodology relies on information from third-party sponsors of such data and other external and internal sources to obtain certain inputs necessary to compute the value of a Strategy. The inability of the Strategy Sponsor and/or the Strategy Calculation Agent to source such necessary data to calculate the relevant formulae of the Strategy may affect the value of such Strategy. Investors considering acquiring or making an investment in a Linked Product should carefully read and understand the information about such Components. However, the Goldman Sachs Group makes no warranty as to the correctness of that information and takes no responsibility for the accuracy of such data or the impact of any inaccuracy of such data on such Strategy.

Linked Products 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

Components.

A Strategy may use values determined using the Strategy Sponsor's own proprietary models

The Strategy may use the Strategy Sponsor's own internal mark of the value of or certain calculations in respect of certain Components which may be derived from proprietary models (the “**Internal Data**”). Investors in Linked Products may not have access to the Internal Data and any associated models.

There is no guarantee that such Internal Data will correspond with market data if any exist, or that would be determined by other market participants. They do not necessarily represent tradable prices.

The Internal Data will depend on the specification of, and inputs used in, the relevant model used by the Strategy Sponsor. A model with a different specification and/or using different inputs would produce different results. The Internal Data may change if required by the Strategy Sponsor's internal policies or applicable law or regulation, or if the models used to calculate it change. The Strategy Sponsor will not be obliged to consider a Strategy when making any changes to the Internal Data or such models and will not have any liability for the effect of such changes on a Strategy.

As such, changes in the value of a Strategy on any day may be opaque and not solely be related to the change in the market value of any relevant Components.

A Strategy 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 or quantity (as applicable) of any Component or any Input Data in relation to the Strategy is corrected after such time as it is used in the Strategy, the Strategy Sponsor shall be under no obligation to use such corrected value (and shall only take such steps as it considers appropriate for the purposes of the Strategy in response to such correction in accordance with its policies and procedures applicable at the relevant time) and may use the weight or quantity (as applicable) as calculated before such correction. As a result, the performance of a Strategy may differ from the performance had such corrected values been used, and possibly materially so.

Changes to administration of and reform of Affected Rates Benchmarks

The Strategy may use one or more Affected Rates Benchmarks as input data for determining the weights, signals or other values of its Components. The Strategy may also include components linked to such Affected Rates Benchmark (such as interest rate derivatives instruments) as its Components or use an Affected Rates Benchmark to convert the return type of the Strategy, amongst other things. Such Affected Rates Benchmarks are the subject of recent national, international and other regulatory guidance and proposals for reform. Some of these reforms are already effective whilst others are still to be implemented. These reforms may cause such Affected Rates Benchmarks to perform differently than in the past, to disappear entirely, or have other consequences which cannot be predicted. For example, USD LIBOR is no longer published or no longer published as a representative rate from 30 June 2023.

In the period prior to an Affected Rates Benchmark ceasing to be published or at the time it ceases to be published, the Strategy Sponsor may determine in a commercially reasonable manner to change the methodology of an affected Strategy, including but not limiting to determining replacement rates for an Affected Rates Benchmark and making other adjustments to account for the differences between the replacement rate and the original Affected Rates Benchmark, in order to permit the continued calculation of the value of the Strategy, to preserve the Strategy Purpose and/or to maintain its ability to hedge the Strategy. However, any such amendments are not yet certain and will only be determined at a future point in time. Those amendments could have unpredictable and adverse effect on the performance of the Strategy and/or any Linked Products to such Strategy, potentially materially so. In particular, changes to the way in which an existing Affected Rates Benchmark is calculated, or difference between the way the original Affected Rates Benchmark and a

replacement rate is calculated could materially impact the value and/or performance of the Strategy in the future, or result in material economic mismatches for investors using Linked Products for hedging or similar purposes.

The Strategy Sponsor will only restate the Strategy Value upon the discovery of certain errors, and the Strategy Sponsor is not required to correct the Strategy Value as of any day more than a certain number of days prior to the discovery of such error by the Strategy Sponsor

Pursuant to the Strategy Description and the current policies and procedures of the Strategy Sponsor (which may be amended from time to time by the Strategy Sponsor), the Strategy Sponsor is not required to restate the Strategy Value for any discrepancy between the Strategy Description and the calculation of the Strategy Value, errors in calculation, publication errors, errors by third party data sources or providers, or the restatement of any underlying Assets, for any day more than a certain number of days prior to the first business day in London on or after which the Strategy Sponsor becomes aware of or identifies such error (such number of days being specified from time to time under such policies and procedures of the Strategy Sponsor, a public summary of which are available at <https://www.goldmansachs.com/disclosures/euro-benchmark-reg-iosco-principles-for-financial-benchmarks-f/summary-of-gs-policy-on-global-benchmark-incident.pdf> (or any successor page)). A failure to restate the Strategy Value to account for such errors may decrease, potentially materially so, the return on any Linked Products relative to a corrected and restated Strategy Value.

(B) RISKS RELATED TO ACTIVELY MANAGED STRATEGIES

The Strategy is actively managed

The adjustable parameter values assigned to each adjustable parameter (which may include, without limitation, weights assigned to Components) are subject to a rebalancing by the Strategy Allocator, subject to any conditions set out in the Strategy Description (“**Rebalancing Conditions**”). There is no guarantee or assurance that any such rebalancing will enhance the performance of the Strategy. For so long as the Strategy Allocator elects not to make any changes to the adjustable parameter value of the adjustable parameters, or no proposed changes to such adjustable parameter value are made that meet the Rebalancing Conditions, then such adjustable parameter values will remain unchanged.

There is no guarantee that a rebalancing will increase the value of the Strategy. None of the Strategy Sponsor, Strategy Calculation Agent or any of their affiliates shall be responsible for the adjustable parameter value selected by the Strategy Allocator or the performance of the Strategy. None of the Strategy Sponsor or the Strategy Calculation Agent have the right to, and nor will they, assess whether or not any proposed rebalancing is in the best interests of investors in Linked Products.

In addition, the Rebalancing Conditions may prevent the Strategy Allocator from rebalancing the adjustable parameter values of the adjustable parameters as rapidly, frequently or to the degree it considers appropriate in view of market, political, financial or other factors. As a result, investors in Linked Products may be exposed to more or less risk than investors engaging in the Components themselves or investing in managed products with fewer restrictions. The Rebalancing Conditions have been agreed to by the Strategy Sponsor and the Strategy Allocator as at the inception of the Strategy.

None of the Strategy Sponsor, the Strategy Calculation Agent or the Strategy Allocator or any of their respective affiliates make any representation express or implied that the Strategy will achieve a positive performance, or a higher performance than any other index or strategy, whether managed or not managed.

The Strategy Allocator

The Strategy Allocator is a third party not affiliated with the Strategy Sponsor or any of its affiliates and is not an agent of the Strategy Sponsor. The Strategy Allocator acts as an independent contractor and has not been appointed by the Strategy Sponsor or the Strategy Calculation Agent as a sub-advisor in respect of the Strategy

or any Linked Product nor as an agent of the Strategy Sponsor or the Strategy Calculation Agent.

The Strategy Allocator has the right, but not the obligation, to propose changes to the adjustable parameter value of any adjustable parameter. If the Strategy Allocator elects not to submit a proposed parameter adjustment, the value of the Strategy may be adversely affected. In addition, if any proposed parameter adjustment is rejected by the Strategy Sponsor, no such rebalancing of the Strategy shall take place which may also have an adverse effect on the value of the Strategy.

Therefore, the value of the Strategy will depend not only on the methodology contained in the Strategy Description but also on the determinations made by the Strategy Allocator in respect of each proposed rebalancing. There is no guarantee that the Strategy Allocator will act rationally and in accordance with current market trends in determining the adjustable parameter values. Therefore, the ability of the Strategy to achieve its objective may be substantially affected by the abilities of, and determinations made by, the Strategy Allocator.

The Strategy Allocator's ability to determine the adjustable parameter values may depend, to a great extent, upon the expertise of key individuals associated with the day-to-day operations of the Strategy Allocator. Any withdrawal of any of these individuals could have an adverse effect on the Strategy and, consequently, any Linked Product.

The day on which any proposed rebalancing is implemented may be postponed or may not be the one proposed by the Strategy Allocator

The Strategy Sponsor or any other relevant person shall not be liable (whether in contract, tort or otherwise) to any person for the failure of the Strategy Sponsor to acknowledge receipt of a notification from the Strategy Allocator outlining a proposed rebalancing. As a result of such failure or any other events as specified in the relevant Strategy Description (including but not limited to any potential disruptions with respect to implementing the rebalancing), the proposed adjustable parameter values may not take effect on the day proposed by the Strategy Allocator.

The Strategy Sponsor may reject a proposed rebalancing

If any proposed rebalancing does not satisfy the Rebalancing Conditions as of the relevant determination date, then the Strategy Sponsor may reject the proposal in its entirety and no rebalancing will occur.

Furthermore, if so specified in the relevant Strategy Description, the Strategy Sponsor may be under no obligation to effect all or any part of any proposed rebalancing and may reject the proposal in its entirety in its sole discretion and for any reason (which, for the avoidance of doubt and without limitation, could include where a proposed rebalancing would otherwise satisfy the relevant Rebalancing Conditions) and no rebalancing will occur.

In either case, any such rejection may have an adverse impact on the performance of the Strategy, perhaps materially so, and the determination of the Strategy Sponsor shall be conclusive and binding in all circumstances. In particular, the Strategy Sponsor will not take into account the interests of any investors in Linked Products when making such determination, and none of the Strategy Sponsor, Strategy Calculation Agent or any of their affiliates shall have any liability for or in connection with the performance of the Strategy (or any Linked Product) as a result thereof. Notwithstanding that the Strategy Sponsor may be entitled to reject any such proposed rebalancing, the Strategy Sponsor shall be entitled to rely upon and assume, and shall not in any circumstances be obliged to verify, that the Rebalancing Conditions in respect of a proposed rebalancing have been satisfied.

No rebalancing once implemented can be set aside on the basis that, as a factual matter, the Rebalancing Conditions were not satisfied. The determination of the Strategy Sponsor will be conclusive and binding in all circumstances without liability to the Strategy Sponsor or any of its affiliates.

The Strategy Sponsor may reject a proposed rebalancing if the Strategy Sponsor and/or any of its affiliates would be prevented from entering into transactions by any applicable internal policy, law or regulation

If, in respect of a proposed rebalancing, the Strategy Sponsor determines that the Strategy Sponsor and/or any of its affiliates would be prevented from entering into transactions in respect of any relevant Component by any applicable internal policy, law or regulation then such proposed rebalancing may be rejected in its entirety and no rebalancing will occur.

Each proposed rebalancing is irrevocable

Unless otherwise agreed by the Strategy Sponsor, each proposed rebalancing is irrevocable and may not be subsequently changed or cancelled by the Strategy Allocator following notification thereof. The inability of the Strategy Allocator to revoke or amend any proposed rebalancing may have an adverse impact upon the performance of the Strategy (which may be material).

The Strategy Sponsor will have knowledge of information regarding changes to the adjustable parameters used to calculate the Strategy prior to the implementation of such changes

In respect of any rebalancing, the Strategy Sponsor will possess information regarding the changes to the adjustable parameters (if any) prior to the implementation of such changes on the relevant rebalancing day. Subject to its regulatory obligations and its internal policies, the Strategy Sponsor is under no obligation to disclose to any person any such information prior to the relevant rebalancing day. Policies and procedures have been established by the Strategy Sponsor to address any conflicts of interest that may arise as a result of possessing such information immediately prior to any rebalancing date and to control access to such information.

The value of the Strategy prior to the date of on which the Strategy Allocator is appointed will be calculated using adjustable parameter values retrospectively provided by the Strategy Allocator

The value of the Strategy in respect of each Strategy Calculation Day falling in the period commencing on, and including, the Strategy Inception Date and ending on, but excluding, the date on which the Strategy Allocator is appointed will be calculated using adjustable parameter values retrospectively provided by the Strategy Allocator. Such adjustable parameter values are provided by the Strategy Allocator retrospectively with the benefit of historical information and analysis relating to the performance of the Components and of relevant markets generally. There is no guarantee that the Strategy Allocator would have determined the same adjustable parameter values for each adjustable parameter if it had been appointed with effect from the Strategy Inception Date. Neither the Strategy Sponsor nor the issuer of any Linked Product provides any assurance or guarantee that the Strategy will operate or would have operated in the past in a manner consistent with the performance of Strategy prior to the date of on which the Strategy Allocator was appointed. As such, any historical returns of 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.

A parameter adjustment may not result in any rebalancing of Components if the optimization constraints are not satisfied on the related parameter adjustment day

There can be no assurance or guarantee that, following the satisfaction of the parameter adjustment constraints and the implementation of any parameter adjustment in accordance with the related adjustable parameter values, there will be any combination of calculated weights in respect of the respective Components which utilise such adjustable parameter values and that satisfy the applicable optimization constraints in respect of the related parameter adjustment day. If the applicable optimization constraints are not satisfied in respect of such parameter adjustment day following the implementation of the related adjustable parameter values, the

calculated weights of such Components may not change (notwithstanding that such optimization constraints may have been satisfied had a parameter adjustment been implemented on the reference date immediately preceding the related notification date).

The reference data used to evaluate any relevant allocation or parameter adjustment constraints may be unavailable

The reference data used by the Strategy Calculation Agent to evaluate whether or not any allocation constraints or parameter adjustment constraints have been satisfied may be unavailable and in such circumstances, by default, previously available data may be used to evaluate such constraints. In the event that such data is out of date or no longer valid, the discrepancies when compared to more current data (once available) could be significant and, as a result, the evaluation of whether or not any allocation constraints or parameter adjustment constraints have been satisfied could be materially different than it would have been if up to date data was available at the relevant time. This could have an adverse effect on the performance of the Strategy and/or any Linked Products.

Certain calculations used for the purposes of evaluating any relevant allocation or parameter adjustment constraints may be determined by reference to the Strategy Calculation Agent's own proprietary models

If so specified in the Strategy Description, the product notional, unit divisor and/or any other relevant calculations that, in each case, may be used for the purposes of evaluating whether or not any allocation constraints or parameter adjustment constraints have been satisfied in respect of a proposed rebalancing, may be calculated by the Strategy Calculation Agent by reference to values or other information that is derived from its own proprietary models. There is no guarantee that the Strategy Allocator will have access to full details of such internal models or the values generated by such models. In addition, there is no guarantee that such internal values will correspond with any relevant market data or that would be determined by other market participants (and any such participants may use alternative models that would produce different results).

On a given proposed rebalancing day, one or more component stocks that are the subject of the relevant rebalancing may be on the RTL and, therefore, that may adversely affect the Strategy's performance

If so specified in the Strategy Description, where a company is placed on the RTL as a result of a potential restriction on Goldman Sachs' ability to principally transact in the stock or options of such company, its shares may be disqualified as a member of the component stock universe of the Strategy. Therefore, as a result, the Strategy Sponsor will not be able to effect any proposed rebalancing that references such component stocks even if the Strategy Sponsor had previously accepted any rebalancing request from the Strategy Allocator that referenced such component stock. Therefore, such disqualification (and the timing of such disqualification) may adversely affect the performance of the Strategy.

Any proposed rebalancing of the Strategy may be subject to disruption

Notwithstanding the time or day on which any notification relating to a proposed parameter adjustment is given by the Strategy Allocator, the relevant Strategy to which such notification relates will only be rebalanced with effect from the relevant rebalancing day, or rebalancing days, as applicable by reference to the change in number of units or target weights (howsoever defined or described in the relevant Strategy Description) of the relevant Component(s) in respect of such rebalancing day(s).

In certain circumstances, including but not limited to where any proposed parameter adjustment is provided in advance or where multiple proposed parameter adjustments are requested by the Strategy Allocator in respect of a single rebalancing day, the Strategy Sponsor may be unable to rebalance the Strategy on the specified rebalancing day or rebalancing days due to the occurrence of certain events (including but not limited to,

Disruption Events) in the intervening time period between provision of the relevant notification and the specified rebalancing day(s). Where the Strategy Sponsor is unable to implement a rebalancing (in whole or in part), the Components will remain unchanged (except to the extent that such may be adjusted as a result of corporate actions affecting such Components). The inability to give effect to a proposed parameter adjustment for such reasons is likely to have an adverse impact the performance of the Strategy and any Linked Product.

The timing of a rebalancing day may be determined by the Strategy Calculation Agent in its sole and absolute discretion and may not be the one targeted by the Strategy Allocator

Where specified in the Strategy Description for the Strategy, the determination of whether a Strategy Calculation Day will constitute a rebalancing day in respect of a proposed rebalancing will be made by the Strategy Calculation Agent in its sole and absolute discretion and the actual rebalancing day in respect of such proposed rebalancing may therefore not be the one targeted by the Strategy Allocator. In addition, the timing of execution of a given instruction may be determined by the Strategy Calculation Agent and may be different to a given time specified by the Strategy Allocator. This discretion of the Strategy Calculation Agent to determine a rebalancing day and a time of execution in respect of a proposed rebalancing may have an adverse impact on the performance of the Strategy, perhaps materially so, and the determination of the Strategy Calculation Agent shall be conclusive and binding in all circumstances.

The proposed calculated target quantities or preliminary component transaction quantities (as the case may be) may be calculated without reference to corrected data

If so specified in the Strategy Description for the Strategy, in the event that the value of any component which is used for the calculation of a proposed calculated target quantity or preliminary component transaction quantity (in each case, howsoever defined in the relevant Strategy Description) is corrected or restated after such time as it is used in any such calculation, the Strategy Calculation Agent will not use such corrected or restated value for the purpose of the relevant calculation and will instead use the relevant proposed calculated target quantity or preliminary component transaction quantity as calculated before such correction or restatement. As a result, the performance of the Strategy may differ from the performance had such corrected or restated values been used, and possibly materially so.

Trading in any relevant Component may be suspended or subject to any short sell circuit breaker

In certain circumstances, the Strategy Sponsor may not be able to execute a rebalancing in whole or in part due to external factors such as, but not limited to, trading suspensions or short sell circuit breakers, in each case, in accordance with regulatory measures or the rules of any relevant exchange.

The Strategy Sponsor may, in certain circumstances, instruct the Strategy Calculation Agent to take an alternative action to that prescribed in the Strategy Calculation Agent Methodology in relation to the adjustment of a Strategy following the occurrence of a corporate action in respect of a Component

Further to the risk factor entitled "The Strategy Sponsor and the Strategy Calculation Agent have the discretion to make determinations that could materially affect the Strategy and create conflicts of interest", the Strategy Sponsor may, in circumstances where it determines that it and/or its affiliates would (after using commercially reasonable efforts) be unable to, or would incur additional costs to, replicate any adjustment or lack thereof proposed in accordance with an applicable Strategy Calculation Agent Methodology following the occurrence of a corporate action in respect of a Component, instruct the Strategy Calculation Agent to take an alternative action (including but not limited to making a different adjustment) to allow the Strategy Sponsor and/or its affiliates to replicate the relevant adjustment or lack thereof and with the goal of preserving the original Strategy Purpose. Determinations made by the Strategy Sponsor in this regard could adversely affect the value of the Strategy or any Linked Product and the exercise by the Strategy Sponsor of such discretion could present them with a conflict of interest of the kind described in the section entitled "Conflicts of Interest" above.

In making any such determinations, the Strategy Sponsor will not be required to, and will not, take the interests of any investor of any Linked Product into account or consider the effect their determinations will have on the value of such a Linked Product. All determinations made by the Strategy Sponsor and shall be conclusive for all purposes and will bind all holders or investors in any Linked Product. The Strategy Sponsor shall not have any liability for such determinations.

Certain calculations may be subsequently adjusted to account for the occurrence of corporate actions in respect of a Component

If so specified in the relevant Strategy Description, certain calculations used for the purposes of determining the number of units, quantity or weight (howsoever defined) in respect of a Component may be subsequently adjusted by the Strategy Calculation Agent to account for the occurrence of any corporate actions that have taken effect in respect of such Component in a defined period before any relevant rebalancing is implemented. Any such adjustment shall be applied by the Strategy Calculation Agent in accordance with the methodology outlined in the relevant Strategy Description and will not take into account the interests of any investors in Linked Products when making such adjustment.

Any relevant foreign exchange conversions specified in the Strategy Description may occur with a lag

The foreign exchange conversions specified in the Strategy Description occur with a specified lag (which may be equal to or greater than zero). In cases where such a lag is greater than zero, the Strategy will remain exposed to the risks associated with currency exchange rate fluctuations during the relevant lag period. Such currency exchange rate fluctuations may impact the returns in a negative way (potentially materially so) on any Linked Product relative to the returns in the event the lag was not in place.

The performance of the Strategy may be reduced by the deduction of certain notional costs that relate to actions or performance of third-parties

If so specified in the Strategy Description, the performance of the Strategy may be reduced by the deduction of a certain fees or a specified percentage rate representing the realised performance of the Strategy in excess of a given threshold (or “high water mark”) which will accrue for the benefit of the Strategy Allocator or other third-parties as specified in the Strategy Description. Such reduced performance will decrease the returns (potentially materially so) on any Linked Product relative to the returns in the event the deduction had not been applied and may be less than those that might have been possible from an investment which did not contain such a deduction as a feature.

Any rebalancing of a Strategy due to a cash resetting or automatic re-weighting mechanism may adversely affect the performance of the Strategy

If so specified in the Strategy Description, on any Strategy Calculation Day where any relevant cash resetting or automatic re-weighting mechanism take effect, the Components shall be rebalanced. The resulting quantity determined for each Component on such Strategy Calculation Day may be materially different from the quantity prevailing in relation to that Component prior to such rebalancing. Changes in the price of the Component subsequent to that rebalancing could have adverse consequences for the performance of the Strategy which may have been avoided if such a rebalancing had not occurred at all. Furthermore, such a rebalancing may impose transaction costs on the Strategy, which have the effect of reducing the value of the Strategy.

Dividends are subject to assumed tax rates which will have a negative impact on the Strategy

If so specified in the Strategy Description, the Strategy will deduct a notional dividend withholding tax from any relevant dividend amounts in respect of a Component, which is intended to reflect the withholding tax rate levied, or the potential tax rate that may be levied, by the country of incorporation or residence of the issuer of such Component. The assumed tax rate (which may be zero) will be determined by the Strategy Calculation Agent

based on its view of applicable law and/or regulations, observable sources and/or market practice. The assumed tax rates may be amended from time to time by the Strategy Calculation Agent. If the assumed tax rate in respect of one or more Component is increased, then the Strategy Value may be affected.

The Strategy Sponsor or any of its affiliates (a "Hedging Party") that has hedged its exposure to the Components will benefit if the effective rate of withholding tax that it incurs in carrying out its hedging activity is less than the synthetic tax withholding applied in respect of the Strategy. Any such benefit will not be passed on to investors in Linked Products.

Cost of maintaining a short cash balance

Subject to the parameters of the applicable Strategy Description, the Strategy may be permitted to hold an aggregated short cash balance position. Where a short cash balance position is in place, which would be a result of maintaining a leveraged position in non-cash components (subject to the allocation constraints set out in the Strategy Description) the Strategy may incur a cost of maintaining such position, as specified in the Strategy Description (expressed as a negative percentage). The deduction of such a cost will have a negative impact (perhaps materially so) on the performance of the Strategy.

Hedging activity and terms of dealing

A Hedging Party may hedge its exposure or potential or expected exposure to the Strategy (and other similar strategies), Linked Products and the Components with an affiliate or a third party. A Hedging Party may make significant returns on this hedging activity independently of the performance of the Strategy or the Components, including in scenarios where the levels at which it executes its hedging transactions are different from the levels specified in the methodology for determining the value of the Strategy (or otherwise where such Hedging Party does not hedge all of its exposure to such Strategy or any relevant Component).

Any returns on a Hedging Party's hedging activity or on any unhedged exposure will not be passed on to investors in Linked Products, and such investors will not have any rights in respect of a Hedging Party's hedge positions. Where a Hedging Party, in accordance with its internal policies and its Terms of Dealing (accessible via <http://www.goldmansachs.com/disclosures/gs-terms-of-dealing.pdf> (or any successor page thereto)), executes hedging activity as principal by trading in the Strategy (or other similar strategies) or the Components on, before or after the related rebalancing day(s), such trading may have an adverse impact on the level at which the Components are rebalanced (which may result in an adverse impact on the performance of the Strategy). Such hedging activity, and the size of such impact, will be linked to the amount of new and outstanding Linked Products at the relevant time and then-prevailing market conditions and may affect the market price of or liquidity in the relevant market of the Strategy or its Components and may result in profit, or loss, to the Hedging Party.

(l) Risks related to Strategies where the price and quantity of Components in respect of a rebalancing is determined by reference to hedging transactions executed by the Strategy Sponsor or any of its affiliates

Additional execution parameters will be determined at the discretion of the Hedging Party

Unless otherwise bilaterally agreed with the Strategy Allocator, the rebalancing price of a Component in respect of a rebalancing will be the weighted average price at which the Hedging Party has executed its hedging transactions. In executing such hedging transactions, the Hedging Party will take into account any specific execution instructions provided from time to time by the Strategy Allocator. However, (i) in the absence of any such execution instructions or (ii) in case such execution instructions do not contain all the required details such as the exact parameterisation of the execution algorithm to be employed by the Hedging Party (in each such case, "**Unspecified Execution Parameters**"), then the Hedging Party will, where applicable, exercise its discretion in determining such Unspecified Execution Parameters. It is possible that the Hedging Party's choice

of the Unspecified Execution Parameters may result in a worse performance of the Strategy compared to the performance that could have been achieved with a different set of execution parameters. The Hedging Party is not required to take the interests of any person into account in determining the Unspecified Execution Parameters. None of the Hedging Party, Strategy Sponsor, Strategy Calculation Agent or any other Relevant Person shall be liable to any person for the choice of the Unspecified Execution Parameters and the impact of such choice on the performance of the Strategy or any relevant rebalancing.

Risks relating to the execution workflow in respect of a rebalancing

Any proposed rebalancing submitted by the Strategy Allocator will be received by the relevant Strategy Sponsor personnel and, therefore, involves aspects of manual intervention and interaction rather than being handled by a fully automated workflow. Although established standards and procedures will be followed in processing any such request, instructions may be subject to interpretation and, therefore, result in a different outcome to that which was targeted by the Strategy Allocator. Unless otherwise specified in the relevant Strategy Description, the Strategy Sponsor is under no obligation to validate and/or verify any relevant proposed rebalancing instructions (or any values contained in such instructions) received from the Strategy Allocator.

The implementation of any rebalancing may differ from the values specified by the Strategy Allocator in any proposed parameter adjustment

Notwithstanding that the Strategy Allocator has specified a proposed change in number of units, quantity or weights (howsoever defined) of any relevant Component in relation to a proposed rebalancing, the actual change in number of units, quantity or weights following such rebalancing shall be determined by reference to the actual number of units executed by the Hedging Party in its hedging transactions relating to such proposed rebalancing (if any) which may be impacted by, amongst other things, market conditions, order size, liquidity, volatility and other disruption events. Therefore, such actual change in number of units, quantity or weights may be less than the proposed change in number of units, quantity or weight specified by the Strategy Allocator and the Hedging Party shall not be under any obligation to execute hedging transactions of any given size or volume.

(C) RISKS RELATED TO STRATEGIES THAT CONTAIN SPECIFIC FEATURES

(I) Risks related to Strategies that are determined by reference to certain volatility calculations

The methodology used to calculate the price or level of a Component is specific to the Strategy

The price or level of a Component or any input relating to such Component (including, without limitation, a specific volatility value) shall be determined in accordance with the methodology and formula set out in the Strategy Description. Such methodology is specific to the Strategy and may differ to indices similar to the Strategy that use alternative methodologies or formulae (such as, for example, Black-Scholes option price formula). There is no guarantee that the use of such methodology or formula will result in the Strategy outperforming such other indices that use an alternative methodology or formula for such calculations.

(II) Risks related to single stock Strategies

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, as of the date of these General Strategy Terms, 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 Linked Products 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 Component 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 apply to certain 871(m) financial instruments (or a combination of financial instruments treated as having been entered into in connection with each other) that have a delta (as defined in the applicable Treasury regulations) of one and are issued (or significantly modified and treated as retired and reissued) on or after January 1, 2017, but will also apply to non-delta-one 871(m) financial instruments (or a combination of financial instruments treated as having been entered into in connection with each other) issued (or significantly modified and treated as retired and reissued) on or after January 1, 2023. Investors in Linked Products 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.

Potential reliance on a weight calculation agent

If so specified in the Strategy Description, the Strategy may rely on a weight calculation agent (as defined and further described in the relevant Strategy Description) to fulfil certain obligations in respect of each rebalancing, including determining the Components to be included in the Strategy and their respective weights. If such entity does not, and/or is unable to, perform its obligations in respect of the Strategy, the performance of the Strategy is likely to be materially affected. In such cases the Strategy Sponsor may postpone one or more rebalancings until the required data are available from such entity. If the appointment of such entity terminates for any reason it is likely that the performance of the Strategy will be impaired, possibly permanently. If for any reason, including as a result of such termination, the relevant data utilised by such entity to determine the Components to be included in the Strategy and their respective weights ceases to be available, it is likely that the Strategy Sponsor will be required to change the Strategy methodology in order to continue determining the Strategy.

Reliance on the Strategy Calculation Agent

The Strategy relies on the Strategy Calculation Agent, which may be a third party if so specified in the Strategy Description, to determine the value of the Strategy, amongst other obligations. If the Strategy Calculation Agent does not, and/or is unable to, perform its obligations in respect of the Strategy, the determination and publication of the value of the Strategy is likely to be materially delayed. In such cases the Strategy Sponsor will aim to replace the Strategy Calculation Agent but there is no guarantee that this will be achieved in a reasonable timeframe and the determination and publication of the value of the Strategy may be delayed for a material period of time. This is likely to have an adverse effect on Linked Products, including the possible termination of such Linked Products.

Potential reliance on a separate strategy calculation agent or corporate action methodology

If so specified in the Strategy Description, the Strategy may rely on a separate methodology to determine, amongst other things, how corporate actions are applied to the Components. Using a different methodology could lead to different outcomes and as such, any changes to such methodology could have a material impact on the Strategy. Unless the Strategy Sponsor also acts as the Strategy Calculation Agent and uses its own calculation methodology, the Strategy Sponsor will not be able to influence changes to such methodology.

However, the Strategy Sponsor may replace a methodology from time to time (including, without limitation, creating a new methodology to determine corporate actions and the relevant adjustments), in the accordance with the section of these General Strategy Terms entitled "*Change in Strategy Methodology*",

and such replacement could have a material impact on the performance of the Strategy.

Exchanges closed on observation days and rebalancing days

The universe of potential stocks in respect of a Strategy may be broad and cover one or multiple jurisdictions and stock exchanges. Therefore, in relation to Strategies referencing a large pool of potential stocks, it is likely that on any observation day and/or rebalancing day the primary exchange(s) for a significant proportion of the Components included in the Strategy will be closed. Where the relevant primary exchange for a Component is closed, the Strategy may use one or more previous prices (or such other prices as determined by the Strategy Sponsor acting in good faith and a commercially reasonable manner) for such Component. As a result, such alternative prices may be used for a significant proportion of the universe of potential stocks when determining the Components and their weights. This may impact the performance of the Strategy as compared to a methodology that required all exchanges to be open on an observation day and/or a rebalancing day.

Exact rebalancing days unavailable

Given the universe of potential stocks may be broad and cover multiple jurisdictions and stock exchanges, the business day calendar used to determine the frequency of rebalancing days is a sub-set of the entire holiday calendar for all possible jurisdictions and stock exchanges. The exact calendar used by the Strategy may not be made public.

The weights assigned to the Components will be published on a delayed basis

The weights assigned to the Components will be published on a delayed basis following each rebalancing day. Investors in Linked Products may not be entitled to further information from the Strategy Sponsor regarding the weights of the Components. The Strategy Sponsor may also have 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 in Linked Products on the secondary market.

Strategy Sponsor determination of the price of Component

To the extent that a Disruption Event has occurred in respect of a Component for any Strategy Calculation Day, the Strategy Sponsor may determine the price of the relevant Component in its commercially reasonable judgment, and in making such determination, the Strategy Sponsor may, but shall not be obliged to, have reference to the most recently available price of the relevant Component. If the Strategy Sponsor makes such a determination in respect of the price of an affected Component, it is likely that such price would be different from what it would have been if a Disruption Event had not occurred and this may have an adverse effect on the value of the Strategy.

Strategy Calculation Agent determination of adjustments to Component

To the extent that an Extraordinary Event has occurred in respect of a Component for any Strategy Calculation Day, the Strategy Calculation Agent may determine adjustments to the value of the Strategy and/or the price of a Component in accordance with the Strategy Calculation Agent Methodology. The determinations will be made by the Strategy Calculation Agent acting in good faith and a commercially reasonable manner. Such determinations may however differ from determinations made in respect of other indices or products by other third parties, potentially materially so.

(III) Risks related to Strategies that reference time weighted average prices

The Strategy uses time weighted average prices in the calculation of the value of the Strategy

The Strategy may, in certain circumstances, use a time weighted average price (a "TWAP") in order to calculate

the price or rate (as applicable) in respect of any relevant day. The TWAPs used in the calculation of the Strategy are calculated by the in accordance with a methodology set out in the Strategy Description which are specific to the Strategy. No assurances can be given that any such TWAP specification used in the calculation of the Strategy is optimal and will have a positive effect on the performance of the Strategy. Any such TWAP may be higher or lower than the reference price or rate (as applicable) in respect of the relevant reference asset and such time. There is no guarantee that the Strategy will outperform an index which is otherwise identical to the Strategy but uses the reference price or rate (as applicable) instead of the relevant TWAP in respect of such reference asset and there is a risk that the Strategy might underperform such an index.

The methodology for the calculation of any relevant TWAP could affect the value of the Strategy

The methodology for the calculation of any relevant TWAP could affect the value of the Strategy and, therefore, the amount payable on any Linked Product on the stated maturity date (or other specified payment dates) of such Linked Product and the market value of such Linked Product before that date. The amount payable on any Linked Products and their market value could also be affected if the entity that calculates such TWAP changes these policies, for example, by changing the manner in which it calculates any relevant TWAP, or if the relevant entity terminates the calculation or publication of such TWAP, in which case the Strategy Sponsor may have to use the reference price or rate (as applicable) for the relevant reference asset. If such policy changes relating to any relevant TWAP or the calculation or publication such TWAP is discontinued or suspended, the Strategy Sponsor will have discretion in determining the adjustments to be made to the Strategy in order to calculate the value of the Strategy.

The policies of the TWAP Sponsor and changes that affect the calculation of any relevant TWAP could affect the value of the GS Strategy

The policies of the relevant entity that calculates a TWAP concerning the calculation of any relevant TWAP could affect the value of the Strategy and, therefore, the amount payable on any Linked Products on the stated maturity date (or other specified payment dates) of such Linked Products and the market value of such Linked Products before that date. The amount payable on any Linked Product and its market value could also be affected if the relevant entity changes these policies, for example, by changing the manner in which it calculates any relevant TWAP, or if such relevant entity terminates the calculation or publication of such TWAP, in which case the Strategy Sponsor may have to use the reference price or rate (as applicable) for the relevant Component. If such policy changes relating to any relevant TWAP or the calculation or publication such TWAP is discontinued or suspended, the Strategy Sponsor will have discretion in determining the adjustments to be made to the Strategy in order to calculate the value of the Strategy.

The entity which calculates a TWAP has the discretion to make determinations that could materially affect the Strategy and create conflicts of interest

The relevant entity that calculates a TWAP in respect of a Strategy does not generally exercise any discretion and owes no fiduciary duties in respect of the Strategy or any Linked Product. However, the relevant TWAP Sponsor has a certain amount of discretion in the event of the occurrence of certain adjustment events or disruption events as outlined above.

Determinations made by the relevant entity could adversely affect the TWAP in respect of a reference asset and a TWAP window and consequently the value of the Strategy or any financial instrument that utilises such TWAP, such as Linked Products. The exercise by the relevant entity of its discretion could present it with a conflict of interest of the kind described in the section of these General Strategy Terms entitled "*Conflicts of Interest*". In making those determinations, the relevant entity will not be required to, and will not, take the interests of holder of any Linked Product into account or consider the effect its determinations will have on the value of such Linked Product. All determinations made by the relevant entity shall be at its sole discretion and

shall be conclusive for all purposes and will bind all holders of any Linked Product. The relevant entity shall not have any liability for such determinations.

The Strategy Sponsor and its affiliates may develop or trade in products linked to competing indices and/or strategies

The Strategy Sponsor may sponsor and calculate indices and/or strategies which have the same or similar objectives to (and have the same or similar Components as) the Strategy, but which have windows of time in which a TWAP is determined which overlap with, or are otherwise different to, those specified in respect of the Strategy and may sponsor and/or calculate more such indices and/or strategies in the future. Further, the Strategy Sponsor may issue or underwrite securities or trade other financial or derivative instruments or investments referenced to such other indices and/or strategies.

(IV) Risks related to Strategies that reference underlying synthetic asset transactions automatically created by transaction or operation modules

Synthetic asset transactions are created automatically by the transaction or operation modules

The quantities of the components in the Strategy may increase or decrease automatically, as a result of the synthetic asset transactions created by the transaction or operation modules on each relevant rebalancing day. Over time this may result in an automatic increase (or decrease) in the Strategy's exposure to the relevant components. Such exposure (which may be a "long" exposure or a "short" exposure) to the relevant components may become material over time and the value of the Strategy may be impacted to a greater degree by any movement in the price or value of such underlying components. Accordingly, such increased exposure to the relevant components may have a material impact upon the performance of the Strategy.

The creation of synthetic asset transactions may result in certain notional costs being incurred with respect to any basket rebalancing

Certain notional basket rebalancing costs which are embedded in the Strategy synthetically reflect the cost of establishing and unwinding synthetic asset transactions upon each basket rebalancing. Each such transaction created automatically by the transaction or operation modules on each rebalancing day will give rise to basket rebalancing costs which are deducted from the value of the Strategy.

Any increase in the number and notional amount of synthetic asset transactions generated by the transaction or operation modules will increase the level of the costs deducted from the value of the Strategy. A strategy which generates fewer or less frequent underlying synthetic transactions than the Strategy may have lower synthetic rebalancing costs than the Strategy.

Past performance of the Strategy affects the synthetic asset transactions determined by the Strategy and the components and prices selected by the Strategy

Synthetic asset transactions generated by the Strategy are calculated with reference to the basket value of the Strategy. In addition, the selection of components (and their corresponding prices) are dependent upon the market environment. Therefore, past values of the basket and the relevant components (and market performance) affect the current composition of the Strategy, and its exposure to individual components.

No synthetic asset transaction will occur with respect to any component or operation module following if the basket value on any day is equal to or less than zero (a "Negative Value Event")

Unless otherwise stated in the Strategy Description, if a Negative Value Event occurs on any relevant day then no further basket rebalancing days will occur after such day. Following such Negative Value Event, no new synthetic asset transaction will occur with respect to any transaction or operation module or component. This means that, following the occurrence of a Negative Value Event, the Strategy will remain exposed to the value

of the outstanding allocated universe of components and the value of the Strategy may potentially be reduced if the values of such components change. Given that the Strategy will no longer synthetically enter into new transactions, it will not gain new exposure to components and will not participate in any changes in value of components other than the ones comprised within the allocated universe of components as of the date of the Negative Value Event.

(V) Risks related to Strategies which contain certain other features

The Strategy may be subject to Non-Tradable Events

If a Non-Tradable Event is specified in the relevant Strategy Description and has occurred (which may include the occurrence of a Disruption Event) or is continuing in respect of a Component on any Strategy Calculation Day on which the value of the Strategy is scheduled to be calculated by the Strategy Sponsor in accordance with the Strategy Description, the units or weight of such Component held by the Strategy in respect of each relevant calculation session may not change until such Non-Tradable Event ceases to exist. The Strategy Sponsor may calculate a tradable level of the Strategy using the same methodology for calculating the value of the Strategy, but using tradable levels of such Component in place of its level (or ask level, bid level or mid-level, as the case may be). In such case, it is likely that the value of the 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.

Following a Stop Loss Event, the Strategy may suffer significant losses

The Strategy may include a stop loss mechanism which aims to limit the maximum loss in the Strategy. However, the Strategy will not be able to unwind its positions in any affected trades immediately, only on the following Strategy Calculation Day. As a result, the Strategy could suffer significant losses before its positions in any affected trades are fully unwound.

Volatility and Strategy risk

A Strategy may have a daily volatility adjustment feature (if so specified in the relevant Strategy Description), which aims to provide a notional volatility-controlled exposure to the Components of such Strategy. This is achieved by periodically increasing or decreasing the exposure of such Strategy to the Components, based on the realized volatility of the Components over a certain period of time relative to a pre-determined volatility target. An increase in the realized volatility of a Component may decrease the exposure of such Strategy to such Component.

If the daily volatility adjustment feature is applicable, an underperformance of the Strategy compared to a similar Strategy without such feature could be observed in periods where the value of a Component in which a Strategy 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 Strategy and in terms of the performance of the Strategy.

Potential investors should make their own investigations and form their own views as to the appropriateness or otherwise of such Strategy, taking into account their own circumstances. In particular, potential investors in Linked Products should note that such Strategy may not reflect the return that could be realized from a direct investment in the Components.

If a Strategy uses an optimisation computer software package, then such package may not determine the mathematically optimal result

As part of its pre-determined set of rules a Strategy 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 Strategy Description, such Strategy may use an Optimiser to calculate the weights of certain 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. Furthermore, the Strategy Calculation Agent may from time to time change the Optimiser used in respect of a Strategy. Different Optimisers may be more or less likely to determine the optimal result for a Strategy and using them could lead to a different performance of a Strategy. If such Strategy employed a different Optimiser, the results of rebalancing could be different and possibly materially so. As such, the performance of the Strategy may be dependent on the choice of Optimiser and could be materially different if the Strategy Sponsor replaces the Optimiser at any time.

If specified in the relevant Strategy Description, the level at which Components are rebalanced will depend on the execution by the Strategy Sponsor

If so specified in the relevant Strategy Description in respect of one or more Components, then the level at which such rebalancing takes place will depend on the Strategy Sponsor's execution level of its own hedge positions. The Strategy Sponsor will not owe any fiduciary duties in respect of such execution (and in particular will not be under any obligations of "best execution" or similar) to any investor in a Linked Product or to any other person.

In times of a whipsawing market in respect of an underlying asset of any Component, the Strategy may be unsuccessful in generating positive returns based upon any momentum risk premium

If the Strategy aims to capture positive returns arising from notional exposure to the momentum risk premium in respect of the underlying assets of a Component it shall rely on a degree of momentum in any trend identified in respect of such underlying assets (i.e. that a trend that is identified will be sustained for a period). In a whipsawing market for any underlying asset, being a market characterised by high volatility and large and/or frequent swings, there may be the rapid and frequent appearance of trends that do not subsequently develop and/or are swiftly reversed. In such circumstances, and where the methodology of the relevant Component is unable to adjust the notional exposure to the relevant underlying asset in sufficient time to limit any adverse effects of such a swing, the methodology of the Strategy may be unsuccessful in generating any positive returns and may perform less well than a strategy intended to capture alternative risk premia.

(VI) Risk related to Strategies that are Intraday Strategies

The Strategy Sponsor may elect to suspend the synthetic execution of new transactions within the Strategy and is not required to correct or restate the Strategy Value to account for specific disruptions

Intraday Strategies will (where applicable) be subject to different treatment from other strategies regarding certain disruptions. In particular, where the Strategy Sponsor determines that (in each case due directly or indirectly to the quality or unavailability of Intraday Data or failures in internal systems and/or data/risk processes) it or an Affiliate is unable (a) prior to a relevant window to determine the hedges required to be executed by the Strategy Sponsor or an Affiliate in relation to its exposure to such Intraday Strategy; or (b) to access any relevant financial market, trading venue or exchange to execute such hedges, including internal trading and order entry systems, then the Strategy Sponsor is likely to suspend the synthetic execution of new transactions within the Strategy. The timing of the re-commencement of trading within the Strategy following such suspension shall be determined by the Strategy Sponsor in its sole and absolute discretion. The Strategy Sponsor may elect to take various other steps in the event of any such issues or circumstances (as further

described in the section “Disruption Events and Consequences” of these General Strategy Terms). Suspension of synthetic execution of new transactions and any other steps taken by the Strategy Sponsor will be likely to materially affect the value of the Strategy had such disruption event not occurred and/or such actions not been taken. Additionally, the Strategy Sponsor will not restate the Strategy Value in such circumstances to take account for any suspension and/or disruption. This may decrease, potentially materially so, the return on any Linked Products relative to a corrected and restated Strategy Value.

The Strategy Sponsor is not required to restate the strategy to account for incorrectly computed quantities of assets or components and the Strategy will be calculated without reference to corrected data

As referenced in the section entitled “Restatements of Input Data”, the Strategy Sponsor is not required to restate or correct a Strategy Value for an Intraday Strategy to account for incorrectly computed Asset or Component Quantities that may arise as a result of any discrepancy between the Strategy Description and the calculation of the Strategy Value, errors in calculation or computation of the Strategy, publication errors (where such calculation, computation or publication errors may include Goldman Sachs internal errors, including errors in the processing of third-party data) (together “Errors”). It is likely that the Strategy Sponsor will not restate the Strategy Value to account for any such Errors in any of these circumstances. If any Component or Input Data is restated, rebased, otherwise adjusted or modified or a level published or provided to the Strategy Calculation Agent in relation to such Component is corrected after its initial publication or provision, the Strategy Sponsor will not use such corrected value for the purpose of calculating the relevant Asset or Component Quantities and will instead use the applicable quantities as calculated before such correction. A failure to restate the Strategy Value to account for such Errors and/or to use corrected values to calculate an Asset or Component Quantity may adversely impact the performance of the Strategy and decrease (potentially materially so) the return on any Linked Product relative to a corrected and restated Strategy Value.

(D) RISKS RELATED TO SPECIFIC COMPONENTS

(I) Risks related to Strategies referencing Components that are shares, ETFs or funds

The reference level of Components which are shares, ETFs or funds may be adjusted to take account of net dividend payments and other potential adjustment events

On the date on which a Component which is a share, ETF or fund commences trading without the rights to receive a dividend, the reference level of such component will be adjusted by the Strategy Sponsor with the aim of increasing the level to a value as if the relevant dividend amount, net of tax, had not been declared. When making such adjustment, the Strategy Sponsor will assume a notional tax rate in respect of the dividend, which will reduce the increase in the reference level for such Component. Such tax rates may vary according to changes in tax laws and procedures.

Any announced dividend in respect of a Component will be reduced by an assumed tax rate (which may be zero), which is intended to reflect the withholding tax rate levied, or the potential tax rate that may be levied, by the country of incorporation or residence of the issuer of such Component. The assumed tax rate (which may be zero) will be determined by the Strategy Sponsor using the relevant Strategy methodology based on its view of applicable law and/or regulations, observable sources and/or market practice. The assumed tax rates may be amended from time to time by the Strategy Sponsor. If the assumed tax rate in respect of one or more Components is increased, then the value of a Strategy may be affected.

The Strategy Sponsor and/or any affiliate that has hedged its exposure to any Component will benefit if the effective rate of withholding tax that it incurs through its hedging activity is less than the synthetic tax withholding applied in respect of the relevant Strategy and such benefit will not be passed on to the investors in Linked Products.

Following the determination by the Strategy Sponsor that an event has occurred that would have a diluting or concentrative effect in respect of a Component or following any adjustment to the settlement terms of listed options or futures contracts on such Component traded on an options or futures exchange, the Strategy Sponsor may make an adjustment to account for such effect. The Strategy Sponsor may, but need not, determine the appropriate adjustment by reference (amongst other things) to the adjustment in respect of such event made by the other equity market dealers and/or exchanges (including but not limited to the reference exchange for such Component, and options and futures exchanges related to such Component) or quoting services. Such adjustment may have an adverse effect on the performance of the Strategy.

(II) Risks related to Strategies referencing Components that are foreign currency 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 Strategy. 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 a Component (and therefore any Strategy referencing such 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 relevant 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 Component referencing such foreign currency exchange rate taken into account for the purposes of the calculation of the value of the Strategy.

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 Strategy and no obligations to the Strategy Sponsor. Each such government or central bank may take actions that could adversely affect the value of the Strategy.

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 Strategy, 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 value of the Strategy. 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.

(III) Risks related to Strategies referencing Components that are options contracts

The rationale for the Strategy is subject to certain trends and assumptions which may result in losses for the Strategy in the long term if underlying markets or prices move contrary to such trends or assumptions.

The rationale for the Strategy will be subject to certain trends and assumptions regarding the underlying market dynamics, including without limitation and by way of example, regarding the price at which implied volatility shall trade compared to the fair expectation of realised volatility and how such price reflects the natural demand for options compared to the supply of options contracts. It is possible that in the future that such underlying markets or supply and demand for the relevant reference asset(s) could change contrary to such trends and assumptions, which could in turn reduce or eliminate the source of gains for the Strategy.

The Components included in the Strategy may be removed or replaced if the existing Component has ceased to be published and has not been replaced by a successor options contract, or has ceased to be liquid, actively traded and generally available for trading, or will be terminated or delisted.

If a Component included in the Strategy has ceased to be published and has not been replaced by a successor options contract, or has ceased to be liquid, actively traded and generally available for trading, or will be terminated or delisted, the Strategy Sponsor may elect to remove or replace such Component in order for the value of the Strategy to continue to be calculated. This may have an adverse impact on the value of the Strategy.

The Components included in the Strategy may be removed or replaced if the relevant price source makes a material change to the existing vanilla option or contract expiration

If the relevant price source makes, in the reasonable judgment of the Strategy Sponsor, a material change in the weighting or composition of, formula for, or method of calculating a Component 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), the Strategy Sponsor may elect to remove or replace such Component in order for the value of the Strategy to continue to be calculated. This may have an adverse impact on the value of the Strategy.

The Strategy may have variable sensitivity to the reference asset underlying the relevant options contract, levels of implied volatility of the relevant options contract and the realised volatility of the relevant options contract.

The Strategy notionally trades options contracts. Sensitivity of options to the moves in value of the reference asset underlying the relevant options contract, the implied volatility of the relevant options contract and the realised volatility of the relevant options contract can be volatile and hard to predict, including changing the sign within a short period of time. Therefore, the Strategy may exhibit performance that is not consistent through time and the Strategy may be path dependent.

(IV) Risks related to Strategies referencing Components that are over-the-counter interest rate derivative transactions

The adjustments made to the relevant swap rate or the annuity of any relevant forward swap contract may not achieve their objective

The methodology of a Strategy may provide for certain adjustments to be made to each of the swap rate and the annuity of a forward swap contract so that it reflects as closely as possible the level of a forward swap rate at which hypothetical transactions could be executed or the level of the annuity of such forward swap contract at which hypothetical transactions could be executed, as the case may be. There is no assurance that such adjustments will achieve the objective and that any swap rate or annuity so adjusted will correspond with, or be similar to, third party market values (if any such values exist) or any values that may be determined by other market participants.

The swap conventions applicable to any relevant forward swap contract are determined by the Strategy Sponsor in its discretion

If so specified in the methodology of a Strategy, the swap conventions applicable to any relevant forward swap contract are determined by the Strategy Sponsor in its discretion and may not reflect market-standard swap conventions for forward interest rate swap transactions or floating rate options that are adopted by the relevant market or accepted by all or most market participants. Such swap conventions determined by the Strategy Sponsor in respect of any relevant forward swap contract may not correspond with, or be similar to, the swap conventions used by other market participants or used to identify the swap components of other indices.

The spot swap rate may be unavailable from the relevant swap source

The forward swap rate is calculated utilizing several inputs including the spot swap rate from a prescribed swap source. In a scenario where this spot swap rate is unavailable, the forward swap rate shall be calculated using an alternative source. This could have an adverse effect on the performance of the Strategy and/or any Linked Products.

Liquidity in transactions relating to the Components may move to other clearing houses or trading venues or may move to transactions relating to other instruments

If (i) liquidity in transactions relating to a Component moves from a clearing house or trading venue on which such Component would generally be cleared or traded to a different clearing house or trading venue, in accordance with market convention or (ii) liquidity in transactions relating to a Component (as identified by the relevant swap conventions) moves to transactions relating to other Components identified by one or more different swap conventions, in accordance with market convention, the Strategy Sponsor has the discretion to replace or remove such Component or assign a zero weight to such Component or any instrument to which such Component is linked from the Strategy and to make such adjustments as may be necessary to reflect such changes(s). This could have an adverse effect on the performance of the Strategy and/or Linked Products.

Liquidity in transactions relating to a spot swap rate published by the relevant swap source may move to transactions relating to a spot swap rate published by a different data source

If liquidity in transactions relating to a spot swap rate published by the relevant swap source has moved 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 spot swap rate used to calculate the Strategy may be the spot swap rate published by such other data source, as determined by the Strategy Sponsor. This could have an adverse effect on the performance of the Strategy and/or any Linked Products.

(V) Risks related to Strategies referencing Components that are or reference commodities or commodity indices

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

The Components (either directly or indirectly) 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 Linked Product should be aware that investments linked to the value of foreign commodity futures contracts involve particular risks.

Certain Components may be linked to commodity futures contracts on physical commodities on trading facilities located outside the United States. The regulations of 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 United States dollars, 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 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 included in the Strategy. In addition, because foreign trading facilities may be open on days when the value of the Strategy is not published, the value of the commodity futures contracts included in the Strategy may change on days when the value of the Strategy is unavailable.

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. These circumstances could adversely affect the level of the components in the Strategy and, therefore, the value of the Strategy and, therefore, any Linked Products.

Commodity prices are characterised by high and unpredictable volatility, which could lead to high and unpredictable volatility of 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, therefore, any Linked Product in varying ways, and different factors may cause the value and volatility of different commodities to move in inconsistent directions and at inconsistent rates.

Commodities are subject to legal and regulatory regimes that may change in ways that could affect the value of the 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 Strategy and are expected to increase the cost of transacting derivatives. This could have an adverse impact on the value of the Strategy.

Exposure to commodity futures contracts through an investment in the Strategy that references commodity indices 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 Linked Products that references commodity indices 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 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.

The Strategy does not track the performance of any relevant underlying commodity index and is likely to deliver returns that differ from the performance of such commodity indices

Whilst the Strategy may reference certain commodity indices (whether directly or indirectly), an investment in Linked Products is not comparable to and should not be benchmarked against an investment in a financial instrument linked to the value of such commodity indices. This is because the differences between the Strategy and such commodity indices are likely to produce different values for the Strategy and such commodity indices at any given time and, therefore, may produce differing returns.

Change in the composition or discontinuance of an underlying commodity index included in the Strategy could affect the value of the Strategy

The Strategy may reference certain underlying commodity indices (whether directly or indirectly). These commodity indices are calculated and maintained by the relevant index sponsor, who is also responsible for the composition of such commodity index. Such index sponsor will have no involvement in the offer and sale of any Linked Products and will have no obligation to any purchaser of such Linked Products. The index sponsor of such commodity index may take any actions in respect of such commodity index without regard to the interests of the Strategy Sponsor of the Strategy or any investors in Linked Products, and any of these actions could adversely affect the value of the Strategy together with the market value of any Linked Products.

The relevant index sponsor can substitute the commodity futures contracts underlying such commodity index (for example, if a commodity futures contract referenced by such commodity 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 commodity index. The composition of commodity index may also change over time as additional commodity contracts satisfy the eligibility criteria or commodity contracts currently included in such commodity index fail to satisfy such criteria. Such changes to the composition of any commodity index included in the Strategy may affect the level of such commodity 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 value of the Strategy. The sponsor of commodity index included in the Strategy may also alter, discontinue or suspend calculation or dissemination of such commodity

index. In such circumstances, the Strategy Sponsor would have the discretion to make determinations with respect to the value of the Strategy including for the purposes of calculating the amount payable on any Linked Product.

Any commodity index referenced by the Strategy may in the future include commodity futures contracts that are not traded on regulated futures exchanges

Any commodity indices referenced by the Strategy shall be based solely on commodity futures contracts traded on regulated futures exchanges (referred to in the United States as "designated contract markets"). At present, such proprietary strategies continue to be comprised exclusively of regulated commodity futures contracts. However, any such proprietary strategies referenced by the Strategy 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 statutes 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 proprietary strategy referenced by the 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 commodity indices included in the 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. 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. In respect of commodity 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 Strategy.

(VI) Risks related to Strategies referencing Components that are credit indices

The Strategy Sponsor and its affiliates are members in Credit Derivatives Determinations Committees and such membership may be adverse to interests of investors in Linked Products

Goldman, Sachs & Co., Goldman Sachs International and other affiliates may be members of one or more Credit Derivatives Determinations Committees in relation to a relevant credit index, and none of them will have any obligation to take into account the interests of investors in Linked Products. Any resolution or determination by a member of the Credit Derivatives Determinations Committees could be adverse to the interests of such investors.

DISCLAIMERS

The following list of disclaimers does not purport to be a complete list or explanation of all the disclaimers associated with the Strategies.

POTENTIAL INVESTORS SHOULD REFER TO THE RELEVANT GENERAL DESCRIPTION, SPECIFICATIONS ANNEX AND/OR OTHER DOCUMENTATION ELEMENT IN RESPECT OF EACH STRATEGY FOR SPECIFIC DEISCLAIMERS RELATING TO SUCH STRATEGY.

THE STRATEGIES ARE TRADEMARKS OF THE GOLDMAN SACHS GROUP.

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ESG DISCLOSURES

ESG Disclosures pursuant to REGULATION (EU) 2019/2089 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 November 2019 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks.

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY	
Item 1. Name of the benchmark administrator.	Goldman Sachs International
Item 2. Type of benchmark	For the purpose of ESG disclosure any of the following types of benchmarks may incorporate this General Strategy Terms as part of its benchmark methodology: Equity, Other
Item 3. Name of the benchmark or family of benchmarks.	For the purpose of ESG Disclosure, this methodology document may apply to the below families of benchmark: <ul style="list-style-type: none"> - Equity Benchmark Family (external only) - Equity Benchmark Family (external and internal) - Equity ESG Benchmark Family (external only) - Credit Benchmark Family (external only) - Credit Benchmark Family (external and internal) - Cross Asset Benchmark Family (external only) - Cross Asset Benchmark Family (external and internal) - Cross Asset ESG Benchmark Family (external and internal)
Item 4. Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	No

**GOLDMAN SACHS
STRATEGY METHODOLOGY DESCRIPTION SERIES W**

Dated: 22 November 2022

This documentation element, the Goldman Sachs Strategy Methodology Description Series W, as may be amended from time to time (this "**Strategy Methodology Description**") comprises certain rules, methodology, definitions and other information applicable to certain notional rules-based proprietary strategies (each, a "**Strategy**").

This Strategy Methodology Description may be amended or modified from time to time 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.

This Strategy Methodology Description should be read in conjunction with the relevant specifications annex (the "**Relevant Specifications Annex**"), together with other documentation elements of the Strategy Description in respect of such Strategy. Other defined terms shall have the meaning given to such term in the other documentation elements of the Strategy Description.

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- A. General Definitions
- B. Transaction Modules
- C. Reproduction, Re-Distribution, Notice to Recipients

Section A: General Definitions

“Component Business Day” means,

- (i) In respect of a Non-Cash Component: Any day on which the Reference Exchange is scheduled to open for a trading session in respect of the Futures Expiries of the relevant Futures Series, including days for which the Reference Exchange has scheduled shortened trading hours; and
- (ii) In respect of Cash Component: each Strategy Calculation Day.

“Component Module” means, a set of parameters that is used directly or indirectly to determine the Roll-in Futures Expiry and Roll-Out Futures Expiry in accordance with the rules set out in this Strategy Methodology Description and the Relevant Specifications Annex. Such Roll-in Futures Expiry and Roll-out Futures Expiry are Terminal Components of the Strategy. A Component Module includes the following parameters:

- (i) the Futures Series;
- (ii) the Reference Exchange;
- (iii) the parameters that are used to determine the Roll Start Date and Roll End Date;
- (iv) the parameters that are used to determine the Roll-in Futures Expiry and Roll-out Futures Expiry; and
- (v) other parameters set out as part of a Component Module in the Relevant Specifications Annex.

“Component Module Target Weight” means the targeted dollar weight in respect of a Component Module.

“Component Timely Value” means,

- (i) In respect of the Cash Component: A constant value of one (1) in respect of each Strategy Calculation Day; and
- (ii) In respect of a Non-Cash Component and a Component Business Day:
 - (a) the Component Timely Value as specified in the Relevant Specifications Annex; or, if not so specified
 - (b) the settlement price of such Non-Cash Component as published by the Reference Exchange,

in each case subject to the Component Timely Value Convention.

“Component Timely Value Convention” means, in respect of a Component and a Strategy Calculation Day which is not a Component Business Day for such Component, the Component Timely Value shall be the Component Timely Value of such Component as of the immediately preceding Component Business Day.

“Daily Settlement Price” means, in respect of a Futures Expiry and any relevant day, the official settlement price in respect of such Futures Expiry on such day which is announced by the Reference Exchange.

“Component Tradable Value” means,

- (i) In respect of the Cash Component: A constant value of one (1) in respect of each Strategy Calculation Day; and
- (ii) In respect of a Non-Cash Component and a Strategy Calculation Day:
 - (a) If no Non-Tradable Event occurs in respect of such Non-Cash Component on such Strategy Calculation Day, the Component Timely Value; and
 - (b) If no Component Module Group is specified in respect of such Non-Cash Component in the Relevant Specifications Annex and a Non-Tradable Event occurs in respect of such Non-Cash Component on such Strategy Calculation Day, the settlement price of such Non-Cash Component on the First Tradable Date. If such Non-Tradable Event continues to exist on the First Tradable Date, the Strategy Sponsor may act in accordance with the relevant provisions set out in the Strategy Description; and
 - (c) If a Component Module Group is specified in the Relevant Specifications Annex and a Non-Tradable Event is occurring in respect of any Non-Cash Component belonging to such Component Module Group on such Strategy Calculation Day, the Component Tradable Value of such Strategy Calculation Day will be equal to the Component Timely Value of such Component on the first Strategy Calculation Day following such Strategy Calculation Day on which no Non-Tradable Event occurs in respect of any Non-Cash Component belonging to such Component Module Group.

“First Tradable Date” means, in respect of a Strategy Calculation Day t and a Futures Expiry, the first Strategy Calculation Day (measured from, and including, Strategy Calculation Day t) on which no Non-Tradable Event exists in respect of such Futures Expiry:

- (i) provided that if one or more Non-Tradable Event(s) in respect of such Futures Expiry 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; and
- (ii) provided that notwithstanding the fact that a Non-Tradable Event may continue to exist on such sixth (6th) Strategy Calculation Day, if the Strategy Sponsor expects that no Non-Tradable Event will exist in respect of such Futures Expiry 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 Futures Expiry, and
- (iii) provided that the Strategy Sponsor may, in its discretion and acting in a commercially reasonable manner, determine that such Non-Tradable Event also results in a Disruption Event; and
- (iv) provided further that notwithstanding a Non-Tradable Event has occurred and is continuing on such Strategy Calculation Day t , the Strategy Sponsor may determine, in good faith and in a commercially reasonable manner, that such Strategy Calculation Day t constitutes the First Tradable Date and the sub-paragraphs (i) and (ii) above shall not apply in such case.

“Futures Expiry” means in respect of a Futures Series, the individual futures contract of that Futures Series associated with a relevant expiration date for delivery of, or settlement in respect of, the underlying of such futures contract.

“Futures Series” means any series of futures contracts that provide for the physical delivery of, or are based on the price of, a specific underlying. All references to the term "Futures Series" shall be deemed to include all Futures Expiries with respect to such Futures Series.

“Initial Component Module Target Weight” means, in respect of a Component Module, the amount specified in the Relevant Specification Annex. If not specified, the Initial Component Module Target Weight shall be equal to the Component Module Target Weight.

“Initial Component Quantity” means the Component Quantity on the Strategy Inception Date. The Initial Component Quantity shall be determined as follows:

- (i) In respect of each Non-Cash Component which is the Roll-Out Futures Expiry i of the immediate following Roll Period in respect of a Component Module m : Initial Component Quantity if specified in Component Module Table, or calculated as below if not specified:

$$\frac{CMTW_{m,init} \times S_{init}}{A_{i,init} \times FX_{i,init}}$$

Where " S_{init} " means the Strategy Initial Value;

" $A_{i,init}$ " is the Component Timely Value of Roll-Out Futures Expiry i on Strategy Inception Date;

" $FX_{i,init}$ " means the applicable Currency Exchange Rate to convert one unit of the Component Currency of Roll-Out Futures Expiry i into the Strategy Currency in respect of Strategy Inception Date (or, where the relevant Component Currency is the same as the Strategy Currency, a constant value of one (1)).

" $CMTW_{m,init}$ " means the Initial Component Module Target Weight in respect of Component Module m . If CIM Weights is specified as Applicable in the Relevant Specifications Annex, then the Initial Component Module Target Weight shall be calculated as:

$$CMTW_{m,init} = \frac{A_{i,init} \times FX_{i,init} \times CIM_{m,init}}{\sum_m A_{i,init} \times FX_{i,init} \times CIM_{m,init}}$$

Where the sum in the denominator is calculated over each Component Module.

" $A_{i,init}$ " is the Component Timely Value of Component i on Strategy Inception Date;

" $FX_{i,init}$ " means the applicable Currency Exchange Rate to convert one unit of the Component Currency of Roll-Out Futures Expiry i into the Strategy Currency in respect of Strategy Inception Date (or, where the relevant Component Currency is the same as the Strategy Currency, a constant value of one (1)); and

" $CIM_{m,init}$ " is the Initial CIM specified in respect of such Component Module m in the relevant Specifications Annex.

- (ii) In respect of the Strategy Currency Cash Component:

$$q_{init,sccc} = S_{init} - \sum_{i=1}^n q_{i,init} \times A_{i,init}$$

Where the summation is taken over each Non-Cash Component i which is denominated in the Strategy Currency.

" S_{init} " means the Strategy Initial Value;

" $q_{i,init}$ " is the Initial Component Quantity of Non-Cash Component i on the Strategy Inception Date; and

" $A_{i,init}$ " is the Component Timely Value of Non-Cash Component i on the Strategy Inception Date.

- (iii) In respect of each Foreign Currency Cash Component:

$$q_{init,fccc} = - \sum_{i=1}^n q_{i,init} \times A_{i,init}$$

Where the summation is taken over each Non-Cash Component i which is denominated in a Foreign Currency.

" $q_{i,init}$ " is the Initial Component Quantity of Non-Cash Component i on the Strategy Inception Date; and

" $A_{i,init}$ " is the Component Timely Value of Non-Cash Component i on the Strategy Inception Date.

"Non-Tradable Event" means, in respect of a Futures Expiry 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 Component Business Day for such Futures Expiry;
- ii) The settlement price of such Futures Expiry remains at a "limit price" which means that the price of such Futures Expiry on such day has increased or decreased from the previous day's settlement price for such Futures Expiry by the maximum amount permitted under the applicable rules of the relevant Reference Exchange;
- iii) a Disruption Event is occurring or existing in respect of such Futures Expiry; or
- iv) if Component Module Group is specified in the Relevant Specifications Annex and a Non-Tradable Event is occurring and existing on a Futures Expiry that is part of the same Component Module Group of such Futures Expiry on such Strategy Calculation Day.

"Non-Tradable Transaction" means a Transaction where any one of the following events is occurring or existing, as determined by the Strategy Sponsor:

- i) The settlement price of the Transaction Component remains at a "limit price" at the Strategy Transaction Execution Timestamp, which means that the price of such Transaction Component has increased or decreased from the previous day's settlement price for such Transaction Component by the maximum amount permitted under the applicable rules of the relevant Reference Exchange;
- ii) a Disruption Event is occurring or existing in respect of such Transaction Component; or
- iii) a Linked Transaction of such Transaction is a Non-Tradable Transaction.

"Reference Exchange" means, in respect of a Futures Expiry, the exchange, facility or platform on or through which such Futures Expiry is traded. The Relevant Specifications Annex will specify the Reference Exchange in respect of a Futures Expiry by reference to the relevant Futures Series.

"Roll-in Futures Expiry" means, in respect of a Component Module and a Roll Period, the Futures Expiry determined as such in accordance with the rule set out in the Relevant Specifications Annex.

"Roll-out Futures Expiry" means, in respect of a Component Module and a Roll Period, the Futures Expiry determined as such in accordance with the rule set out in the Relevant Specifications Annex.

"Roll Day" means, in respect of a Component Module, each Roll Business Day which falls within a Roll Period in respect of such Component Module. If such Roll Business Day is not specified in the Relevant Specifications Annex, it shall be assumed to be the Component Business Day.

"Roll Month" means, in respect of a Strategy Calculation Day, the calendar month and calendar year into which such Strategy Calculation Day falls, unless specified otherwise in the Specifications Annex.

"Roll Period" means, in respect of a Component Module, the period from and including the Roll Start Date to and including the Roll End Date, whereby Roll Start Date and Roll End Date shall be determined in accordance with the rule set out in the Relevant Specifications Annex. If **"Different Roll-In / Roll-Out Futures Expiry"** is specified as Applicable in the Relevant Specifications Annex, then the definition of Roll Period will exclude any Roll Period for which the Roll-In Futures Expiry and the Roll-Out Futures Expiry correspond to the same Futures Expiry.

“Roll Weight” means, in respect of a Futures Expiry, a Component Module and a Strategy Calculation Day, an amount that is calculated as follows:

- (i) If such Strategy Calculation Day does not fall in a Roll Period in respect of such Component Module,
 - (a) If the Futures Expiry is the Roll-in Futures Expiry of the immediate preceding Roll Period of such Component Module: One (1); or
 - (b) If the Futures Expiry is the Roll-out Futures Expiry of the immediate preceding Roll Period of such Component Module: Zero (0);
- (ii) If such Strategy Calculation Day falls in a Roll Period in respect of such Component Module:
 - (a) If Custom Roll Weight is specified to be Applicable in respect of such Strategy, the Roll Weight shall be determined as specified in the Relevant Specifications Annex.
 - (b) If Custom Roll Weight is specified to be Not Applicable in respect of such Strategy or is not so specified:
 - I. If the Futures Expiry is the Roll-in Futures Expiry of such Roll Period: the sum of the Roll Fraction of each Roll Day of such Roll Period that falls prior to and on such Strategy Calculation Day; or
 - II. If the Futures Expiry is the Roll-out Futures Expiry of such Roll Period: the sum of the Roll Fraction of each Roll Day of such Roll Period that falls strictly after such Strategy Calculation Day.

Section B: Transaction Modules

Each Strategy is using the following Transaction Modules if the relevant parameters are set out in the Relevant Specifications Annex:

1. Weight Multiplier Rolling Transaction Module
2. FX Hedging – Standard Transaction Module
3. Non-Tradable Events Transaction Module

1. Weight Multiplier Rolling Transaction Module

Transaction Module Description

The purpose of this Transaction Module is to roll the position in the Roll-out Futures Expiry to the Roll-in Futures Expiry using commodity index multipliers (CIM) or component module target weights (CMTW), as applicable.

Transaction Module Overview

The purpose of this Transaction Module is to roll the position in the Roll-out Futures Expiry to the Roll-in Futures Expiry using CIMs or CMTWs as applicable.

The Strategy Sponsor will be calculating the Component Target Weight in respect of each Roll-in Futures Expiry and Roll-out Futures Expiry in line with the procedure set out in the paragraph "Basket Rolling".

Basket Rolling

In respect of a Roll Period and each Component Module, this Transaction Module will generate Transactions to roll the position in the Roll-out Futures Expiry to the Roll-in Futures Expiry over the course of one or multiple Transaction Module Execution Days at the relevant Transaction Price, whereby the attributes of each Transaction shall be as follows:

Transaction Module Quantity Type	Target
Transaction Module Cash Type	Value Neutral
Transaction Module Execution Day	<p>If CIM Weights is specified as Not Applicable in the Relevant Specification Annex</p> <p style="text-align: center;">Each Roll Day and each Additional Rebalancing Day if specified in the Relevant Specifications Annex</p> <p>If CIM Weights is specified as Applicable in the Relevant Specification Annex:</p> <p style="text-align: center;">Each day which is a Roll Day for any Component Module within the Strategy.</p>
Transaction Component	In respect of each Component Module, the Roll-in Futures Expiry or the Roll-out Futures Expiry, as the case may be.
Transaction Price	<p>If Roll Price Agreement is specified as Not Applicable (or is not so specified) in the Relevant Specification Annex: the Component Timely Value in respect of the relevant Transaction Component and Transaction Module Execution Day</p> <p>If Roll Price Agreement is specified as Applicable in the Relevant Specification Annex: the Roll Adjustment Price in respect of the relevant Transaction Component and Transaction Module Execution Day.</p>
Preliminary Component Transaction Quantity	<p>Unless otherwise specified in the Relevant Specifications Annex, In respect of a Component Module and each Transaction Module Execution Day r, one Transaction shall be generated by this Transaction Module in respect of each of the Roll-In and Roll-Out Futures Expiries i with the following Preliminary Component Transaction Quantity:</p> $TQ_{i,r} = \frac{CTW_{i,m,r} \times S'_{Ref(r)}}{A_{i,Ref(r)} \times FX_{i,Ref(r)}}$ <p>Where:</p>

	<p>"S_{Ref(r)}" means:</p> <ul style="list-style-type: none"> • If the Rebalance Reference Date is not specified to be the same day as the Transaction Module Execution Day <i>r</i>: the Strategy Value in respect of Ref(<i>r</i>); or • If the Rebalance Reference Date is specified to be the same day as the Transaction Module Execution Day <i>r</i>: $\sum_{i=1}^n q_{i,Prev(r)} \times A_{i,r} \times FX_{i,r}$ <p>Where the summation is taken over each Component <i>i</i> of the Strategy.</p> <p>"q_{<i>i,Prev(r)</i>}" is the Component Quantity of Component <i>i</i> on the Strategy Calculation Day immediately preceding Roll Day <i>r</i>;</p> <p>"A_{<i>i,r</i>}" is the Component Timely Value of Component <i>i</i> on Roll Day <i>r</i>; and</p> <p>"FX_{<i>i,r</i>}" means the applicable Currency Exchange Rate to convert one unit of the Component Currency of Component <i>i</i> into the Strategy Currency in respect of Roll Day <i>r</i> (or, where the relevant Component Currency is the same as the Strategy Currency, a constant value of one (1));</p> • If such Strategy Value is negative, then "S_{Ref(r)}" means zero (0). <p>"Ref(r)" means the Rebalance Reference Date in respect of Transaction Module Execution Day <i>r</i>, determined in accordance with the rule set out in the Relevant Specifications Annex;</p> <p>"A_{<i>i,Ref(r)</i>}" is the Component Timely Value of Component <i>i</i> on Ref(<i>r</i>);</p> <p>"FX_{<i>i,Ref(r)</i>}" means the applicable Currency Exchange Rate to convert one unit of the Component Currency of Component <i>i</i> into the Strategy Currency in respect of Ref(<i>r</i>) (or, where the relevant Component Currency is the same as the Strategy Currency, a constant value of one (1)); and</p> <p>"CTW_{<i>i,m,r</i>}" means the Component Target Weight in respect of Futures Expiry <i>i</i> (for the avoidance of doubt, <i>i</i> can represent both a Roll-In Futures Expiry and a Roll-Out Futures Expiry) and Component Module <i>m</i>, determined in respect of Transaction Module Execution Day <i>r</i> and is calculated as follows:</p> <ul style="list-style-type: none"> • If CIM Weights is specified as Not Applicable or is not specified: $CTW_{i,m,r} = CMTW_{i,m,r} \times RW_{i,m,r}$ <p>Where:</p> <p>" CMTW_{<i>i,m,r</i>} " means: the Component Module Target Weight in respect of the Component Module <i>m</i> and Transaction Module Execution Day <i>r</i>.</p> <ul style="list-style-type: none"> • If <i>i</i> is the Roll-In Futures Expiry in respect of Component Module <i>m</i>: the CMTW in respect of
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the Component Module m and the Roll Month in respect of Transaction Module Execution Day r . If no CMTW is specified in respect of Component Module m and such Transaction Module Execution Day r , the CMTW shall be deemed the CMTW in respect of the Component Module m and the immediately preceding Transaction Module Execution Day, unless otherwise specified in the Relevant Specifications Annex.

- If i is the Roll-Out Futures Expiry in respect of Component Module m : the CMTW of the Roll-In Futures Expiry in respect of the Component Module m and the immediately preceding Roll Month in respect of Transaction Module Execution Day r ;

" $RW_{i,m,r}$ " means the Roll Weight in respect of Futures Expiry i , Component Module m and a Transaction Module Execution Day r .

- If CIM Weights is specified as Applicable:

$$CTW_{i,m,r} = \frac{A_{i,m,Ref(r)} \times FX_{i,m,Ref(r)} \times CIM_{i,m,r} \times RW_{i,m,r}}{\sum_{i,m} A_{i,m,Ref(r)} \times FX_{i,m,Ref(r)} \times CIM_{i,m,r} \times RW_{m,r}}$$

Where:

" $\sum_{i,m}$ " is a sum taken over all Component Modules m and all Roll-In and Roll-Out Futures Expirys (each represented by a distinct i in the sum) associated with each such Component Module m on such Transaction Module Execution Day r ;

" $CIM_{i,m,r}$ " means:

- If i is the Roll-In Futures Expiry in respect of Component Module m : the CIM in respect of the Component Module m and the Roll Month in respect of Transaction Module Execution Day r . If no CIM is specified in respect of Component Module m and such Transaction Module Execution Day r , the CIM shall be deemed the CIM in respect of the Component Module m and the immediately preceding Transaction Module Execution Day, unless otherwise specified in the Relevant Specifications Annex.
- If i is the Roll-Out Futures Expiry in respect of Component Module m : the CIM in respect of the Component Module m of the immediately preceding Roll Month in respect of Transaction Module Execution Day r ;

" $RW_{i,m,r}$ " means the Roll Weight in respect of Futures Expiry i , Component Module m and a Transaction Module Execution Day r ; and

" $A_{i,m,Ref(r)}$ " means the Component Timely Value of Futures Expiry i associated with Component Module m on Ref(r);

" $FX_{i,m,Ref(r)}$ " means the applicable Currency Exchange Rate to convert one unit of the Component Currency of Futures Expiry i associated with Component Module m on

	<p>Ref(r) into the Strategy Currency;</p> <p>The Transactions generated in respect of the Futures Expiries of the same Component Module for the same Transaction Module Execution Day shall be Linked Transactions.</p>
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The Strategy Sponsor may amend the attributes of a Transaction under certain circumstances as described under the section entitled "*Disruption Events and Consequences*" of the General Strategy Terms.

2. FX Hedging – Standard Transaction Module

Module Description: This Transaction Module aims to reduce the exposure of the Strategy Value to exchange rate fluctuations of Foreign Currencies against the Strategy Currency. For this purpose, this Transaction Module generates Transactions in the Strategy Currency Cash Component and the relevant Foreign Currency Cash Components with the aim of bringing the net exposure of the Strategy Value to Foreign Currencies to zero, following the execution of such Transactions. For the avoidance of doubt, a Strategy will continue being exposed to the risk of exchange rate fluctuations for the periods in-between the Transactions being generated by this Transaction Module.

In respect of the relevant Transaction Module Execution Day and Transaction Module Execution Time Stamp and each Foreign Currency contained in the Strategy, this Transaction Module shall simultaneously generate two (2) Transactions:

- (i) A synthetic purchase or disposal of Component Quantities of the Cash Component denominated in such Foreign Currency (the “**Foreign Currency Transaction**”); and
- (ii) An offsetting synthetic disposal or purchase of Component Quantities of the Strategy Currency Cash Component (the “**Strategy Currency Transaction**”).

Transaction Component: In respect of the relevant Transaction Module Execution Day and Transaction Module Execution Time Stamp:

- (i) In respect of the Foreign Currency Transaction: The Foreign Currency Cash Component denominated in the relevant Foreign Currency.
- (ii) In respect of the Strategy Currency Transaction: The Strategy Currency Cash Component.

Preliminary Component Transaction Quantity: In respect of the relevant Transaction Module Execution Day and Transaction Module Execution Time Stamp:

- (i) In respect of the Foreign Currency Transaction (the “**Foreign Currency Preliminary Component Transaction Quantity**”):

$$TQ_{c,t,u}^{ForeignCurrency} = \sum_i -1 \times A_{i,tObs,uObs} \times q_{i,tObs,uObs}$$

- (ii) In respect of the Strategy Currency Transaction (the “**Strategy Currency Preliminary Component Transaction Quantity**”):

$$TQ_{t,u}^{StrategyCurrency} = -1 \times TQ_{c,t,u}^{ForeignCurrency} \times FX_{c,t,uFXObs}$$

Where:

Subscript *i* refers to each Component which is denominated in the relevant Foreign Currency;

Subscript *c* refers to the relevant Foreign Currency;

Subscript *t* refers to the relevant Transaction Module Execution Day;

Subscript *u* refers to the relevant Transaction Module Execution Time Stamp;

Subscript *tObs* refers to the relevant Component Observation Day;

Subscript *uObs* refers to the relevant Component Observation Time Stamp;

Subscript *uFXObs* refers to the relevant FX Rate Observation Time Stamp;

$TQ_{c,t,u}^{ForeignCurrency}$ is the Foreign Currency Preliminary Component Transaction Quantity in respect of the relevant Foreign Currency on Transaction Module Execution Day *t* and Transaction Module Execution Time Stamp *u*;

$A_{i,tObs,uObs}$ is the Component Timely Value⁽ⁱ⁾ in respect of the relevant Component Observation Day and the relevant Component Observation Time Stamp;

$q_{i,tObs,uObs}$ is the Component Quantity⁽ⁱ⁾ in respect of the relevant Component Observation Day and the relevant Component Observation Time Stamp;

$TQ_{t,u}^{StrategyCurrency}$ is the Strategy Currency Preliminary Component Transaction Quantity on Transaction Module Execution Day *t* and Transaction Module Execution Time Stamp *u*;

$FX_{c,t,uFXObs}$ is the Currency Exchange Rate in respect of the relevant Foreign Currency on Transaction Module Execution Day *t* and the relevant FX Rate Observation Time Stamp;

The following attributes shall apply equally to Foreign Currency Transactions and Strategy Currency Transactions:

Transaction Module Quantity Type	Additive
Transaction Module Cash Type	Value Effective

Transaction Module Execution Day	Unless otherwise specified in the relevant Specifications Annex, each calendar day which satisfies each of the following criteria: (i) such calendar day is a Strategy Calculation Day; and (ii) such calendar day is a Currency Fixing Day.
Transaction Module Execution Time Stamp	Unless otherwise specified in the relevant Specifications Annex, the end of the relevant Transaction Module Execution Day.
Component Observation Day	Unless otherwise specified in the relevant Specifications Annex , the Component Observation Day in respect of a Transaction Module Execution Day shall be the Strategy Calculation Day immediately preceding such Transaction Module Execution Day.
Component Observation Time Stamp	Unless otherwise specified in the relevant Specifications Annex , the end of the relevant Strategy Calculation Day.
FX Rate Observation Time Stamp	Unless otherwise specified in the relevant Specifications Annex , 4:00 pm London time.

3. Non-Tradable Events Transaction Module

Module Description: The purpose is to amend, postpone or cancel Non-Tradable Transactions in respect of Components for which this Transaction Module is specified to be applicable.

Transaction Component: In respect of the relevant Transaction Module Execution Day and Transaction Module Execution Time Stamp, each Component in respect of which the Non-Tradable Events Applicability is specified to be "Applicable" in the relevant Specifications Annex and in respect of a which a Non-Tradable Transaction has occurred.

Transaction Module Quantity Type	Additive
Transaction Module Cash Type	Value Effective
Transaction Module Execution Day	As defined in the Strategy Description, and if not so specified each Strategy Calculation Day
Transaction Module Execution Time Stamp	The end of the relevant Strategy Calculation Day
Preliminary Component Transaction Quantity	The Transaction Quantity of the Non-Tradable Transaction
Strategy Transaction Time Stamp	As defined for the Non-Tradable Transaction

Amendment, Postponement or Cancellation of a Non-Tradable Transaction: In respect of a Non-Tradable Transaction on a Transaction Module Execution Day, this Transaction Module shall amend, postpone or cancel Non-Tradable Transactions as follows:

- (i) If "Non-Tradable Events Applicability" is specified in the relevant Specifications Annex in respect of a Transaction Component to be:
 - a) "Applicable: Postpone Next Day" then the execution of the Non-Tradable Transaction shall be postponed to the immediately following Component Trading Day. Such postponed Transaction shall be executed before any other Transactions, if any, which are generated by any Transaction Module other than this Non-Tradable Events – Standard Transaction Module and which are scheduled for the same Strategy Transaction Time Stamp on the immediately following Component Trading Day; or
 - b) "Applicable: Postpone Next Time Stamp" then the execution of the Non-Tradable Transaction shall be postponed to the immediately following Strategy Transaction Time Stamp. If there are no further Strategy Transaction Time Stamps scheduled in respect of such Transaction Module Execution Day then the execution of the Non-Tradable Transaction shall be postponed to the first Strategy Transaction Time Stamp on the immediately following Component Trading Day. Such postponed Transaction shall be executed before any other Transactions, if any, which are 1) generated by any Transaction Module other than this Non-Tradable Events – Standard Transaction Module and 2) scheduled for the same postponed Strategy Transaction Time Stamp; or
 - c) "Applicable: Cancel" then the Non-Tradable Transaction shall be cancelled and no replacement of such Non-Tradable Transaction shall take place,

each in respect of the Transaction Component of the Non-Tradable Transaction.

If the Non-Tradable Transaction is a Value Neutral Transaction then also the Offsetting Cash Transaction associated with such Non-Tradable Transaction shall be postponed or cancelled (as applicable) in a similar manner as the Non-Tradable Transaction, in accordance with the provisions of the above clauses a), b) and c), as applicable.

- (ii) If "Non-Tradable Events Applicability" is specified in the relevant Specifications Annex in respect of a Transaction Component to be "Not applicable" or if not so specified then this Transaction Module shall not make any amendments, postponement or cancellation to the relevant Non-Tradable Transaction.

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