GOLDMAN SACHS MOMENTUM BUILDER FOCUS ER INDEX

METHODOLOGY

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Overview

*The following overview of the Goldman Sachs Momentum Builder Focus ER Index 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 description of the Goldman Sachs Momentum Builder Focus ER Index and its operations that follow in this document (such operations, including the related algorithm, the "**Methodology**", and such algorithm, the "**Methodology algorithm**"). Capitalized terms used but not defined in the overview have the meanings given to such terms in the more detailed description that follows.*

The Goldman Sachs Momentum Builder Focus ER Index (the "**Index**") represents a notional investment in the components of various indices and hypothetical cash positions (the "Cash Position Components"), subject to various deductions described below. The Index is comprised of a Base Index (which may include a hypothetical cash position referred to as the "**Return-Based Money Market Position**") and non-interest bearing hypothetical cash positions. The Base Index potentially provides exposure to the following asset classes:

- *Focused U.S. Equities*, through two indices respectively comprised of futures contracts on U.S. large-cap equities and U.S. technology equities;

- *Other Developed Market Equities,* through two indices respectively comprised of futures contracts on European and Japanese equities;

- *Developed Market Fixed Income*, through three indices respectively comprised of futures contracts on U.S. Treasuries, German Government Bonds and Japanese Government Bonds;

- *Emerging Market Equities,* through an index comprised of futures contracts on emerging market equities;

- *Commodities*, through an index comprised of futures contracts on gold; and

- *Cash Equivalent,* through a Return-Based Money Market Position.

Each such asset class is referred to herein as an "**Asset Class**", each component of an Asset Class (whether an index or the Return-Based Money Market Position) is referred to herein as an "**Underlying Asset**", and each Underlying Asset other than the Return-Based Money Market Position is referred to herein as an "**Index Component**". The Underlying Assets are specified in the annex hereto (the "**Annex**").

On each Index Business Day, for each look-back period of three (3), six (6) and nine (9) months, the Methodology algorithm seeks to identify the combination of Underlying Asset Target Weights (including a Return-Based Money Market Position) that would have provided the highest historical returns to the Base Index, subject to a 5% volatility constraint applied to the Base Index (which may be relaxed under certain circumstances as described in the section "*Calculation of the Underlying Asset Target Weights*" below) and constraints on the maximum and minimum weights of each Underlying Asset and Asset Class set forth in the Annex. For each

Underlying Asset, the Underlying Asset Target Weights identified by the Methodology algorithm for each of the three look-back periods are averaged to provide an Averaged Underlying Asset Target Weight as described in the section "*Calculation of the Averaged Underlying Asset Target Weights*" below. Finally, the Averaged Underlying Asset Target Weights are averaged over the most recent ten Index Business Days, as further described in the section "*Calculation of the Underlying Asset Weights*" below (the "**Weight Averaging Period**"), to determine the Underlying Asset Weight of each Underlying Asset in the Base Index. The Base Index includes a Return-Based Money Market Position, which may comprise a significant portion of the Base Index in certain market environments (for example, a negative return environment). The Base Index is calculated on an excess return basis, reflecting a deduction of the return that could be earned on a notional cash deposit at the "**Notional Interest Rate**" (which is the federal funds rate, determined as specified in the Annex).

The Index may be rebalanced from the Base Index into a non-interest bearing hypothetical cash position (the "**Deleverage Cash Position**") (for the avoidance of doubt, such rebalancing from the Base Index into the Deleverage Cash Position is separate from any allocation to the Return-Based Money Market Position as an Underlying Asset comprising part of the Base Index) as a result of a volatility control feature applied to the Base Index (as described in "*Calculation of the Volatility Control Exposure*" and related sections below) (the index resulting from application of the volatility control feature, the "**Volatility Controlled Index**"). The volatility control feature at the Volatility Controlled Index level ratably reduces exposure to the Base Index and rebalances into a non-interest bearing Deleverage Cash Position to the extent that the volatility measure of the Base Index exceeds 5% (the volatility measure of the Base Index is based on the higher of two exponentially weighted realized volatilities of the Base Index using (i) a short-term "decay factor" of 0.94 giving relatively greater weight to more recent volatilities and (ii) a long-term "decay factor" of 0.97 giving relatively greater weight to older volatilities).

The Index may be rebalanced from the Volatility Controlled Index into another non-interest bearing hypothetical cash position (the "**Momentum Risk Control Cash Position**") as a result of a momentum risk control adjustment feature that seeks to decrease exposure to the Volatility Controlled Index to the extent that the Volatility Controlled Index has demonstrated negative price momentum over a period of 100 Index Business Days (as described in "*Calculation of the Momentum Risk Control Exposure*" and related sections below). The momentum risk control adjustment feature may further reduce exposure to the Volatility Controlled Index (and consequently, the Base Index) based on the number of days over the preceding 21 Index Business Days (the "**Momentum Risk Control Exposure Averaging Period**") that the Volatility Controlled Index has demonstrated negative price momentum compared to its level from 100 Index Business Days earlier (i.e., for each of the 21 Index Business Days, by comparing the level of the Volatility Controlled Index on such Index Business Day to its level 100 Index Business Days earlier), as described in more detail below.

Any portion of the Index not allocated to the Base Index will be allocated to the Deleverage Cash Position or the Momentum Risk Control Cash Position (together, the "**Non-Interest Bearing Cash Positions**"), or both.

The value of the Index (the "**Index Value**") is calculated on each Index Business Day in U.S. dollars. The Base Index is calculated on an excess return basis, reflecting a deduction of the return that could be earned on a notional cash deposit at the Notional Interest Rate. The returns of the Volatility Controlled Index (composed of the Base Index and the Deleverage Cash Position) reflect the weighted sum of (i) the excess returns of the Base Index as described above and (ii) a zero return attributable to the non-interest bearing Deleverage Cash Position, further reduced in each case by a deduction rate of 0.65% per annum (accruing daily), where the relative weights attributable to the Base Index and the Deleverage Cash Position (if any) are determined based on the application of the 5% volatility control. The returns of the Index are based on the weighted sum of (i) the returns of the Volatility Controlled Index and (ii) a zero return attributable to the non-interest bearing Momentum Risk Control Cash Position, as further reduced by a deduction rate of 0.65% per annum (accruing daily) applied to the weight of the Momentum Risk Control Cash Position, where the relative weights attributable to the Volatility Controlled Index and the Momentum Risk Control Cash Position (if any) are determined based on the application of the momentum risk control adjustment mechanism. As a result, any portion of the Index attributable to a Return-Based Money Market Position, a Deleverage Cash Position or a Momentum Risk Control Cash Position will effectively have a zero net return on an excess return basis before deducting 0.65% per annum (accruing daily). Any interest accrued on the Return-Based Money Market Position is deemed to be reinvested on a daily basis in such Return-Based Money Market Position. See "*Calculation of the Index Value*" and related sections below for additional details.

Goldman Sachs & Co. LLC (the "**Index Sponsor**") has retained Solactive AG to serve as Calculation Agent for the Index. In the event the Index Sponsor appoints a replacement Calculation Agent, a public announcement will be made via press release. The Index Sponsor does not have any obligation to ensure that the relevant Calculation Agent continues to publish, and the Index Sponsor may discontinue publication of, the value of the Index at any time at the sole discretion of the Index Committee. The Index Sponsor may at any time appoint one or more replacement Calculation Agents including itself or an affiliate.

Unless otherwise indicated, any public announcement contemplated by this Methodology shall be made on the website of the Calculation Agent.

The Methodology

Overview

At any given time, the Base Index tracks the weighted excess return of the Underlying Assets over the return that could be earned on a notional cash deposit at the Notional Interest Rate. The respective weights of the Underlying Assets, which can be as low as zero (although US Large-Cap Equities and US Technology Equities must have a minimum combined weight of 20%), are rebalanced daily on each Index Business Day within a set of pre-determined investment and volatility constraints by applying the Methodology algorithm. On any Index Business Day, the Index may be rebalanced (i) from the Base Index into a non-interest bearing Deleverage Cash Position as a result of a volatility control feature applied to the Base Index (as described in "*Calculation of the Volatility Control Exposure*" and related sections below) and (ii) from the

Volatility Controlled Index into another non-interest bearing Momentum Risk Control Cash Position as a result of a momentum risk control adjustment feature that seeks to decrease exposure to the Volatility Controlled Index to the extent that the Volatility Controlled Index has demonstrated negative price momentum over a period of 100 Index Business Days (as described in "*Calculation of the Momentum Risk Control Exposure*" and related sections below). Rebalancings during Market Disruption Events are described under "*Rebalancing; Impact of Disruptions*". In addition, the Index Committee intends to review the Methodology at least once a year, and may make changes to the Methodology from time to time (including after any such annual review) if it determines, in its sole discretion, that such changes are necessary or desirable in light of the goals of the Index. Any such changes to the Methodology will be publicly announced at least 60 New York business days prior to their effective date. Notwithstanding anything in this Methodology to the contrary, the Index Committee may discontinue publication of the Index at any time in its sole discretion.

Base Index Rebalancing

On each Index Business Day, the Calculation Agent, pursuant to the Methodology and subject to the applicable constraints, seeks to select the combination of permitted Underlying Asset weights that would have given the Base Index the highest historical total return (as described under "*Calculation of the Underlying Asset Target Weights*" below). The Base Index will then be reweighted on such Index Business Day from the previous Underlying Asset Weights to the newly determined Underlying Asset Weights. The Underlying Asset Weight for each Underlying Asset in respect of an Index Business Day will be determined by taking the average of such Underlying Asset's Underlying Asset Target Weights over the Weight Averaging Period over the three look-back windows (determined as described under "*Calculation of the Underlying Asset Weights*" and "*Calculation of the Averaged Underlying Asset Target Weights*" below).

Volatility Control Feature

The Methodology has a volatility control feature applied on any Index Business Day. This has the effect of reducing the exposure of the Index to the performance of the Base Index (and consequently the Underlying Assets) by rebalancing a portion of the Base Index into a non-interest bearing hypothetical Deleverage Cash Position to the extent that the realized volatility of the Base Index exceeds the Volatility Control Level of 5%. The volatility control feature is in addition to the volatility constraint of the Methodology algorithm.

Momentum Risk Control Adjustment Mechanism

The Methodology includes a momentum risk control adjustment feature applied to the Volatility Controlled Index on any Index Business Day. This has the effect of reducing the exposure of the Index to the performance of the Volatility Controlled Index (and consequently further reducing the exposure of the Index to the Base Index and the Underlying Assets) by rebalancing a portion of the Volatility Controlled Index into a non-interest bearing hypothetical Momentum Risk Control Cash Position based on the Momentum Risk Control Exposure (as further described under "*Calculation of the Index Value*" below). The Momentum Risk Control Exposure is a

weighted percentage of the number of Index Business Days over a period of 21 Index Business Days during which the Volatility Controlled Index Level equals or exceeds the Volatility Controlled Index Level on the 100th Index Business Day preceding such Index Business Day, with a value of 1 assigned to Index Business Days for which the condition is satisfied and a value of 0.25 assigned to Index Business Days for which the condition is not satisfied (determined as described in more detail under "*Calculation of the Momentum Risk Control Exposure*" below).

Excess Returns and Deduction Rate

The Index Value is calculated on each Index Business Day in U.S. dollars. The Base Index is calculated on an excess return basis, reflecting a deduction of the return that could be earned on a notional cash deposit at the Notional Interest Rate. The Notional Interest Rate will be reset daily on each Index Business Day starting from and including the Base Index Base Date (as specified in the Annex). The returns of the Volatility Controlled Index (composed of the Base Index and the Deleverage Cash Position) reflect the weighted sum of (i) the excess returns of the Base Index as described above and (ii) a zero return attributable to the non-interest bearing Deleverage Cash Position, further reduced in each case by a deduction rate of 0.65% per annum (accruing daily), where the relative weights attributable to the Base Index and the Deleverage Cash Position (if any) are determined based on the application of the 5% volatility control. The returns of the Index are based on the weighted sum of (i) the returns of the Volatility Controlled Index and (ii) a zero return attributable to the non-interest bearing Momentum Risk Control Cash Position, as further reduced by a deduction rate of 0.65% per annum (accruing daily) applied to the weight of the Momentum Risk Control Cash Position, where the relative weights attributable to the Volatility Controlled Index and the Momentum Risk Control Cash Position (if any) are determined based on the application of the momentum risk control adjustment mechanism. As a result, any portion of the Index attributable to a Return-Based Money Market Position, a Deleverage Cash Position or a Momentum Risk Control Cash Position will effectively have a zero net return on an excess return basis before deducting 0.65% per annum (accruing daily). Any interest accrued on the Return-Based Money Market Position is deemed to be reinvested on a daily basis in such Return-Based Money Market Position. See "*Calculation of the Index Value*" and related sections below for additional details.

Publication of the Index

Solactive AG (the "**Calculation Agent**") calculates and publishes the value of the Index on each Index Business Day and publishes it on both Bloomberg and Reuters. The relevant tickers are specified in the Annex. The Index Sponsor does not have any obligation to ensure that the relevant Calculation Agent continues to publish, and the Index Sponsor may discontinue publication of, the value of the Index at any time at the sole discretion of the Index Committee. The Index Sponsor may at any time appoint one or more replacement Calculation Agents including itself or an affiliate.

Publication of Changes to the Index and to the Methodology

Changes to the components of the Index made by the Index Committee will be publicly announced as promptly as is reasonably practicable and normally at least five Index Business Days prior to the effective date of the changes. Changes to the Methodology made by the Index

Committee will be publicly announced at least 60 New York business days prior to their effective date. Adjustments made by the Calculation Agent in response to market adjustment events and potential adjustment events will be publicly announced as promptly as is reasonably practicable.

Index Committee

An Index Committee is responsible for overseeing the Index and the Methodology, while the Calculation Agent is responsible for the day-to-day implementation of the Methodology, for the calculation of the Index, including responding to Market Disruption Events (as defined under "*Market Disruption Events*" below) and potential adjustment events, and for publication of the Index Values and the Methodology. The Index Committee is comprised (as of the date hereof) of employees of The Goldman Sachs Group, Inc. or one or more of its affiliates. At least 40 percent of the committee is comprised of employees of non-revenue generating functions (such employees being "control side" employees). Other members consist of employees of The Goldman Sachs Group, Inc.'s global markets division, which includes employees who regularly trade the Underlying Assets. If the Index Committee exercises any discretion related to the Index, as described in this Methodology, such exercise of discretion must be approved by 100% of the control side employees present at the relevant Index Committee meeting.

The Index Committee may exercise limited discretion with respect to the Index, as contemplated by the Methodology, including in the situations described under "*Changes to the Index Constituents*" and "*Publication of Changes to the Index and to the Methodology.*" Subject to the exceptions described under "*Publication of Changes to the Index and to the Methodology*", any such changes or actions are publicly announced as promptly as is reasonably practicable and normally at least 60 New York business days prior to their effective date. The Calculation Agent may from time to time consult the Index Committee on matters of interpretation with respect to the Methodology.

Because the Index Committee considers information about changes to the Index and related matters that may be potentially market moving and material, all Index Committee discussions, including those with the Calculation Agent, are confidential. The Index Committee will determine the successor of any of its members.

1. **Base Index Values**

   1.1. Calculation of the Base Index Value

The Base Index Value on the Base Index Base Date (as defined in the Annex) is equal to 100. On any given Index Business Day$_{(t)}$ following the Base Index Base Date, the Base Index Value is calculated according to the following formula:

$$BI_t = BI_{t-1} \times \left[\frac{BITR_t}{BITR_{t-1}} - Interest\_Rate_{t-1} \times DCF_{t-1,t} \right]$$

Where:

Subscript $_{(t)}$ refers to the given Index Business Day$_{(t)}$;

Subscript $_{(t-1)}$ refers to the Index Business Day immediately preceding (but not including) Index Business Day$_{(t)}$;

BI$_{date}$ means the Base Index Value as of date$_{(date)}$;

BITR$_{date}$ means the Base Index Total Return Value as of date$_{(date)}$;

Interest_Rate$_{t-1}$ means the Notional Interest Rate as of date$_{(t-1)}$; and

DCF$_{t-1,t}$ is the day count fraction for the period from (but excluding) date$_{(t-1)}$ to (and including) the given Index Business Day$_{(t)}$, determined by using the USD Rate Day Count Convention (as specified in the Annex).

1.2. Calculation of the Base Index Total Return Value

The Base Index Total Return Value on the Base Index Base Date is equal to 100. On any given Index Business Day$_{(t)}$ following the Base Index Base Date, the Base Index Total Return Value is calculated according to the following formula:

$$BITR_t \ = BITR_{t-1} \times \left[1 + \sum_{i=1}^{n} w_{i,t-1}^{BI} \times \left(\frac{A_{i,t}}{A_{i,t-1}} - 1 \right) \right]$$

Where:

Subscript $_{(t)}$ refers to the given Index Business Day$_{(t)}$;

Subscript $_{(t-1)}$ refers to the Index Business Day immediately preceding (but not including) Index Business Day$_{(t)}$;

Subscript $_{(i)}$ refers to the relevant Underlying Asset;

BITR$_{date}$ means the Base Index Total Return Value as of date$_{(date)}$;

n is the number of eligible Underlying Assets (10);

$w_{i,date}^{BI}$ is the Underlying Asset Weight$_{(i)}$ of Underlying Asset$_{(i)}$ as of date$_{(date)}$ (which may be zero); and

A$_{i,date}$ means the Underlying Asset Value$_{(i)}$ of Underlying Asset$_{(i)}$ as of date$_{(date)}$.

1.3. Underlying Asset Weights, and Base Index Rebalancing

The respective target weights of the Underlying Assets in the Base Index (each an "**Underlying Asset Target Weight**" and together the "**Underlying Asset Target Weights**"), which can be as low as zero (although US Large-Cap Equities and US Technology Equities must have a minimum combined weight of 20%), are determined for each Look-Back Period on each Index Business Day, within the investment and volatility maximum constraints described in the attached table "*Overview of the Underlying Assets*" in the Annex and below, by applying the Methodology algorithm. The weights of the Underlying Assets in the Base Index (each an "**Underlying Asset Weight**" and together the "**Underlying Asset Weights**") will then be adjusted daily on each Index Business Day such that the weight of each Underlying Asset is equal to the average of the Averaged Underlying Asset Target Weights (which Averaged Underlying Asset Target Weights is the average of the Underlying Asset Target Weights determined in respect of each Look-Back Period) over the Weight Averaging Period.

1.3.1. *Calculation of the Underlying Asset Target Weights*

The target weight attributed to each Underlying Asset pursuant to the Methodology on each Index Business Day (regardless of whether a Market Disruption Event occurs on that day) is intended to maximize the total return performance of the Underlying Assets based on an analysis of the historical returns of the Underlying Assets, subject to the constraints included in the Methodology.

For each Look-Back Period (as specified below), the Methodology algorithm seeks to select — out of all the combinations of admissible Underlying Asset Target Weights within a set of investment constraints and volatility constraints described below — the combination with the highest Annualized Assets Combination Return. Among other things, this requires the Calculation Agent to calculate the Annualized Assets Combination Return and the Annualized Assets Combination Realized Volatility for each relevant Look-Back Period.

The Averaged Underlying Asset Target Weight for an Underlying Asset will be equal to the average of the target weights for that Underlying Asset determined in respect of each Look-Back Period (with rounding effects treated as described below under "*Rounding Convention*"). For the avoidance of doubt, rounding will be applied only when calculating the Averaged Underlying Asset Target Weight, but not at the level of each individual Look-Back Period.

If on an Index Business Day, for any Look-Back Period, no combination of Underlying Asset Target Weights complies with the pre-defined investment and volatility constraints, then the Methodology algorithm will successively relax the volatility constraints by increments of 0.50%, up until two times the initial volatility constraints, until a combination of Underlying Asset Target Weights can be found that complies with the pre-defined investment constraints and updated volatility constraint. If, after such relaxation, no combination of Underlying Asset Target Weights can be found, the Methodology algorithm will select from all combinations of Underlying Asset Target Weights that comply with the investment constraints, the combination with the lowest Annualized Assets Combination Realized Volatility, regardless of that combination's Annualized Assets Combination Return. The particular combination so selected will therefore exceed the volatility constraint.

The "**Look-Back Period**" on any given Index Business Day is the period from (and excluding) the day which falls respectively nine (9), six (6) or three (3) calendar months before the third Index Business Day prior to the given Index Business Day (or, if any such date is not an Index Business Day, the Index Business Day immediately preceding such day) to (and including) the third Index Business Day prior to the given Index Business Day.

- Investment Constraints: Investment constraints set a minimum weight and a maximum weight (specified in the section "*Overview of the Underlying Assets*" in the Annex) for each Underlying Asset as well as a minimum weight and a maximum weight (specified in the section "*Overview of the Underlying Assets*" in the Annex) for each Asset Class (for the avoidance of doubt, the sum of the weights for each Underlying Asset within an Asset Class has to be greater than or equal to the minimum weight for that Asset Class and less than or equal to the maximum weight for that Asset Class). Negative weights (that is, short positions) are not permitted by

the Methodology, but weights can be as low as zero (although US Large-Cap Equities and US Technology Equities must have a minimum combined weight of 20%) so that the performance of zero-weighted Underlying Assets would not be reflected in the performance of the Base Index for the relevant periods. The sum of the weights of all Underlying Assets in the Base Index is always equal to 100% (with rounding effects treated as described below under "*Rounding Convention*").

Where, among other situations described under "*Changes to the IndexConstituents*", an Underlying Asset ceases to exist, or is no longer tradable and is not replaced by the Index Committee in the manner described below, it will be deemed to have been assigned a zero weight in the Base Index and will be replaced with a hypothetical position in the Money Market Position. On the next Index Business Day, the weights of the remaining Underlying Assets will be calculated pursuant to the Methodology except that any Underlying Asset that ceases to exist, or is no longer tradable will be assigned a zero weight. If either the US Large-Cap Equities or US Technology Equities cease to exist, or is no longer tradable and is not replaced by the Index Committee in the manner described below, the minimum combined weight of 20% applicable to those Underlying Assets will apply to the remaining Underlying Asset.

The minimum weight and maximum weight per Underlying Asset and the minimum weight and maximum weight per Asset Class applicable to the Base Index are set out in the section "*Overview of the Underlying Assets*" in the Annex.

- Volatility Constraint: The volatility constraint of the Methodology algorithm sets a limit of 5% on the Annualized Assets Combination Realized Volatility within a Look-Back Period of any selected combination of Underlying Asset Target Weights, which may be relaxed as described above if no admissible combination of Underlying Asset Target Weights satisfies the initial volatility constraint.

Realized volatility is a historical calculation of the degree of movement based on prices or values of an asset observed periodically in the market over a specified period. The realized volatility of an asset is characterized by the frequency of the observations of the asset price used in the calculation and the period over which observations are made.

1.3.2. Calculation of the Underlying Asset Weights

On each Index Business Day$_{(t)}$, the Underlying Asset Weight$_{(i)}$ of an Underlying Asset $_{(i)}$ is calculated according to the following:

$$w_{i,t}^{BI} = \frac{1}{10} \times \sum_s w_{i,s}^{Averaged\ Target}$$

Where:

Subscript $_{(i)}$ refers to the relevant Underlying Asset;
Subscript $_{(t)}$ refers to the relevant Index Business Day;

Subscript $_{(s)}$ refers to the relevant Index Business Day and each Index Business Day (on which no Market Disruption Event occurs or is continuing with respect to any Underlying Asset) prior to such Index Business Day within the relevant Weight Averaging Period;

$w_{i,t}^{BI}$ is the Underlying Asset Weight$_{(i)}$ of Underlying Asset$_{(i)}$ on calendar date$_{(t)}$; and

$w_{i,s}^{Averaged\ Target}$ is the Averaged Underlying Asset Target Weight$_{(i)}$ of Underlying Asset$_{(i)}$ on calendar date$_{(s)}$;

The "**Weight Averaging Period**" on any given Index Business Day is the period from (but excluding) the day which is 10 Index Business Days (on which no Market Disruption Event occurs or is continuing with respect to any Underlying Asset) prior to the given Index Business Day to (and including) the given Index Business Day.

1.3.3. Calculation of the Averaged Underlying Asset Target Weights

On each Index Business Day $_{(t)}$, the Averaged Underlying Asset Target Weight$_{(i)}$ of an Underlying Asset $_{(i)}$ is calculated according to the following formula:

$$w_{i,t}^{Averaged\ Target} = \frac{1}{3} \times \sum_{l=1}^{3} w_{i,t,l}^{Target}$$

where:

Subscript $_{(i)}$ refers to the relevant Underlying Asset;
Subscript $_{(t)}$ refers to the relevant Index Business Day;
Subscript $_{(l)}$ refers to the relevant Look-Back Period;

$w_{i,t}^{Averaged\ Target}$ is the Averaged Underlying Asset Target Weight$_{(i)}$ of Underlying Asset$_{(i)}$ on calendar date$_{(t)}$ (with rounding effects treated as described below under "Rounding Convention"); and

$w_{i,t,l}^{Target}$ is the Underlying Asset Target Weight$_{(i)}$ of Underlying Asset$_{(i)}$ for the Look-Back Period$_{(l)}$ on calendar date$_{(t)}$ as determined by the Methodology algorithm.

Rounding Convention: The Averaged Underlying Asset Target Weights computed on each Index Business Day is rounded to the nearest three decimal places with 0.05% (0.0005) being rounded upward. For example, if the optimal Averaged Underlying Asset Target Weights is 12.36% (0.1236), it would be rounded up to 12.4% (0.124). The effect of rounding is that the sum of the rounded weights may not add up to 100%. For this reason, on each Index Business Day, the sum of the rounded Averaged Underlying Asset Target Weights is deducted from 100%. If the resulting excess weight is positive, it is added to the Underlying Asset with the highest average historical return over the three Look-Back Periods for that Index Business Day regardless of whether this might cause the Averaged Underlying Asset Target Weight to violate any of the constraints specified above. If the resulting excess weight is negative, its absolute value is subtracted from Averaged Underlying Asset Target Weight of the Underlying Asset that had the lowest average historical return over the three Look-Back Periods for that Index Business Day

and an Averaged Underlying Asset Target Weights higher than the absolute value of the excess amount being deducted regardless of whether this might cause the Averaged Underlying Asset Target Weight to violate any of the constraints specified above.

1.3.4. Calculation of the Annualized Assets Combination Return

The Annualized Assets Combination Return, during the relevant Look-Back Period, of each admissible combination of Underlying Asset Target Weights, with respect to any given Index Business Day, is calculated according to the following formula:

$$AAC\_Return_t = \sum_{i=1}^{n} a_i \times AssetReturn_{i,t}$$

Where:

Subscript $_{(t)}$ refers to the relevant Index Business Day;
Subscript $_{(i)}$ refers to the relevant Underlying Asset;
AAC_Return$_t$ is the Annualized Assets Combination Return, during the relevant Look-Back Period, of the given combination of Underlying Asset Target Weights on Index Business Day$_{(t)}$;
n is the number of Underlying Assets (10);
a$_i$ is the Underlying Asset Target Weight$_{(i)}$ in the given combination of Underlying Asset Target Weights; and
AssetReturn$_{i,t}$ is the Annualized Asset Return of the Underlying Asset $_{(i)}$ as of the Index Business Day$_{(t)}$, and is calculated according to the following formula:

$$AssetReturn_{i,t} = \frac{252}{N_t} \times \sum_{s} \ln\left(\frac{A_{i,s}}{A_{i,s-1}}\right)$$

Where:

Subscript $_{(i)}$ refers to the relevant Underlying Asset;
Subscript $_{(t)}$ refers to the relevant Index Business Day;
Subscript $_{(s)}$ refers to each Index Business Day (on which no Market Disruption Event occurs or is continuing with respect to any Underlying Asset) within the relevant Look-Back Period;
AssetReturn$_{i,t}$ is the Annualized Asset Return, during the relevant Look-Back Period, of the Underlying Asset$_{(i)}$ on Index Business Day$_{(t)}$;
N$_t$ is the actual number of Index Business Days (on which no Market Disruption Event occurs or is continuing with respect to any Underlying Asset) within the relevant Look-Back Period;
A$_{i,s}$ is the Underlying Asset Value$_{(i)}$ of Underlying Asset$_{(i)}$ on Index Business Day$_{(s)}$; and
A$_{i,s-1}$ is the Underlying Asset Value$_{(i)}$ of Underlying Asset$_{(i)}$ on the Index Business Day immediately preceding Index Business Day$_{(s)}$.

1.3.5. Calculation of the Annualized Assets Combination Realized Volatility

The Annualized Assets Combination Realized Volatility, during the relevant Look-Back Period, of each admissible combination of Underlying Asset Target Weights, with respect to any Index Business Day, is calculated according to the following formula:

$$AAC\_Realized\_Volatility_t = \sqrt{\sum_{i,j=1}^{n} a_i \times a_j \times AssetCovariance_{i,j,t}}$$

Where:

Subscript $_{(t)}$ refers to the relevant Index Business Day;

Subscript $_{(i)}$ and $_{(j)}$ refer to the relevant Underlying Assets;

AAC_Realized_Volatility$_t$ is the Annualized Assets Combination Realized Volatility, during the relevant Look-Back Period, of the given combination of Underlying Asset Target Weights on Index Business Day$_{(t)}$;

n is the number of Underlying Assets (10);

a_i is the Underlying Asset Target Weight$_{(i)}$ in the given combination of Underlying Asset Target Weights;

a_j is the Underlying Asset Target Weight$_{(j)}$ in the given combination of Underlying Asset Target Weights; and

AssetCovariance$_{i,j,t}$ is the Annualized Asset Co-Variance between Underlying Asset$_{(i)}$ and Underlying Asset$_{(j)}$ during the relevant Look-Back Period on Index Business Day$_{(t)}$, and is calculated according to the following formula:

$$AssetCovariance_{i,j,t} = \frac{252}{5 \times N_t} \times \sum_{s} \left[\ln\left(\frac{A_{i,s}}{A_{i,s-5}}\right) \times \ln\left(\frac{A_{j,s}}{A_{j,s-5}}\right) \right]$$

Where:

Subscript $_{(i)}$ and $_{(j)}$ refer to the relevant Underlying Assets;

Subscript $_{(s)}$ refers to each Index Business Day (on which no Market Disruption Event occurs or is continuing with respect to any Underlying Asset) within the relevant Look-Back Period;

Subscript $_{(t)}$ refers to the relevant Index Business Day;

N_t is the actual number of Index Business Days (on which no Market Disruption Event occurs or is continuing with respect to any Underlying Asset) within the relevant Look-Back Period;

$A_{i,s}$ is the Underlying Asset Value$_{(i)}$ of Underlying Asset$_{(i)}$ on Index Business Day$_{(s)}$;

$A_{i,s-5}$ is the Underlying Asset Value$_{(i)}$ of Underlying Asset$_{(i)}$ on the fifth (5th) Index Business Day immediately preceding Index Business Day$_{(s)}$;

$A_{j,s}$ is the Underlying Asset Value$_{(j)}$ of Underlying Asset$_{(j)}$ on Index Business Day$_{(s)}$; and

$A_{j,s-5}$ is the Underlying Asset Value$_{(j)}$ of Underlying Asset$_{(j)}$ on the fifth (5th) Index Business Day immediately preceding Index Business Day$_{(s)}$.

Rebalancing; Impact of Disruptions

If a Base Index rebalancing or an Index rebalancing must be effected on an Index Business Day which corresponds to the first day of a given Market Disruption Event (as defined in "Market Disruption Events") with respect to any Underlying Asset included in the Index, the Calculation Agent shall then rebalance the Base Index or the Index as if (i) for each Underlying Asset that had not been affected by such Market Disruption Event, the Index Business Day occurred on such day and (ii) for each Underlying Asset that had been affected by such Market Disruption Event, the Index Business Day occurred on the first day on which there was no Market Disruption Event occurring or continuing. An Index Business Day will be deemed not to occur on a business day if a Market Disruption Event is continuing (as opposed to occurring for the first time). Besides, an Additional Index Holiday will be deemed to occur on the first day on which there is no Market Disruption Event occurring or continuing after such Market Disruption Event and which is an Asset Business Day for all of the Underlying Assets.

Solely for purposes of calculating the volatility (variance) and volatility controlled index level which includes an Index Business Day, which corresponds to the first day of a given Market Disruption Event with respect to any Underlying Asset, the Base Index Value or the Underlying Asset Value will include any Underlying Asset that has been affected by a Market Disruption Event and will be calculated by assuming the Reference Level of the affected Underlying Asset is equal to the Reference Level on the first day on which there is no Market Disruption Event occurring or continuing.

On the sixth New York business day following the occurrence of a Market Disruption Event with respect to any Underlying Asset included in the Index, if such Market Disruption Event is continuing, the Index Committee may determine in its sole discretion to instruct the Calculation Agent to rebalance the Index using a specified price. In the event the Index Committee determines on such sixth New York business day, in its sole discretion, that no such instructions should be given to the Calculation Agent, the Index Committee may revisit such determination on any business day thereafter on which the Market Disruption Event is continuing.

2. Index Values

2.1. Calculation of the Index Value

The Index Value on the Index Base Date (as defined in the Annex) is equal to 100. On any following Index Business Day$_{(t)}$, the Index Value is calculated according to the following formulas:

$$IV_t = IV_{t-1} \times \left[1 + MRCE_{t-1} \times \left(\frac{VCIL_t}{VCIL_{t-1}} - 1 \right) - \left(1 - MRCE_{t-1} \right) \times Deduction\_Rate \right. $$
$$\left. \times DCF_{t-1,t} \right]$$

Where:

Subscript $_{(t)}$ refers to the given Index Business Day$_{(t)}$;
Subscript $_{(t-1)}$ refers to the Index Business Day immediately preceding (but excluding) Index Business Day$_{(t)}$;
IV_{date} refers to the Index Value as of date$_{(date)}$;
$MRCE_{date}$ refers to the Momentum Risk Control Exposure as of date $_{(date)}$;
$VCIL_{date}$ refers to the Volatility Controlled Index Level as of date$_{(date)}$;
$Deduction\_Rate$ refers to the Deduction Rate (as specified in the Annex); and
$DCF_{t-1,t}$ is the day count fraction for the period from (but excluding) date$_{(t-1)}$ to (and including) the given date$_{(t)}$, determined by using the USD Rate Day Count Convention (as specified in the Annex).

2.2. Calculation of the Momentum Risk Control Exposure

On any Index Business Day$_{(t)}$, the Momentum Risk Control Exposure is calculated as follows:

$$MRCE_t = \frac{1}{21} \sum_s MRCE_s^{Target}$$

Where:

$$MRCE_t^{Target} = \left\{ \begin{array}{ll} 1 & if \ VCIL_t \geq VCIL_{t-100} \\ 0.25 & otherwise \end{array} \right\}$$

And where:

Subscript $_{(t)}$ refers to the given Index Business Day$_{(t)}$;
Subscript $_{(t-100)}$ refers to the one-hundredth (100th) Index Business Day immediately preceding (but excluding) Index Business Day$_{(t)}$;
Subscript $_{(s)}$ refers to each Index Business Day falling within the relevant Momentum Risk Control Exposure Averaging Period;
$MRCE_t$ refers to the Momentum Risk Control Exposure as of date $_{(t)}$;
$MRCE_{date}^{Target}$ refers to the Momentum Risk Control Target Exposure as of date $_{(date)}$;
$VCIL_{date}$ refers to the Volatility Controlled Index Level as of date$_{(date)}$;

The "Momentum Risk Control Exposure Averaging Period" on any given Index Business Day is the period from (but excluding) the 23rd Index Business Day prior to the given Index Business Day to (and including) the 2nd Index Business Day prior to the given Index Business Day.

2.3. Calculation of the Volatility Controlled Index Level

The Volatility Controlled Index Level on the Volatility Controlled Index Base Date (as defined in the Annex) is equal to 100. On any following Index Business Day$_{(t)}$, the Volatility Controlled Index Level is calculated according to the following formulas:

$$VCIL_t = VCIL_{t-1} \times \left(1 + VCE_{t-1} \times \left(\frac{BI_t}{BI_{t-1}} - 1\right) - Deduction\_Rate \times DCF_{t-1,t}\right)$$

Where:

Subscript $_{(t)}$ refers to the given Index Business Day$_{(t)}$;
Subscript $_{(t-1)}$ refers to the Index Business Day immediately preceding (but excluding) Index Business Day$_{(t)}$;
$VCIL_{date}$ refers to the Volatility Controlled Index Level as of date$_{(date)}$;
VCE_{date} refers to the Volatility Control Exposure as of date $_{(date)}$;
BI_{date} means the Base Index Value as of date$_{(date)}$;
$Deduction\_Rate$ refers to the Deduction Rate (as specified in the Annex); and
$DCF_{t-1,t}$ is the day count fraction for the period from (but excluding) date$_{(t-1)}$ to (and including) the given date$_{(t)}$, determined by using the USD Rate Day Count Convention (as specified in the Annex).

In the sections above, the term (1- *VCE$_{t-1}$* × *MRCE$_{t-1}$*) would correspond to the combined weight of the Non-Interest Bearing Cash Positions described in the "*Overview*" above.

2.4. Calculation of the Volatility Control Exposure

The Volatility Control Exposure with respect to any Index Business Day$_{(t)}$ is calculated according to the following formula:

$$VCE_t = \min\left(100\%, \frac{Volatility\ Control\ Level}{\max(BaseIndexRealizedVol_t^{0.94}, BaseIndexRealizedVol_t^{0.97})}\right)$$

Where:

Subscript $_{(t)}$ refers to the given Index Business Day$_{(t)}$;
VCE_t refers to the Volatility Control Exposure with respect to date $_{(t)}$;
$Volatility\ Control\ Level$ refers to the Volatility Control Level (as specified in the Annex); and
$BaseIndexRealizedVol_t^{\lambda}$ refers to the Base Index Exponentially Weighted Realized Volatility with respect to a decay factor λ as of date $_{(t)}$.

2.5. Calculation of the Base Index Exponentially Weighted Realized Volatility

The Base Index Exponentially Weighted Realized Volatility on the Volatility Controlled Index Base Date (as defined in the Annex) is equal to the Volatility Control Level (as specified in the Annex). On each following Index Business Day$_{(t)}$, the Base Index Exponentially Weighted Realized Volatility is calculated as follows:

$$BaseIndexRealizedVol_t^{\lambda}$$

$$= \sqrt{\lambda \times \left(BaseIndexRealizedVol_{t-1}^{\lambda}\right)^2 + (1 - \lambda) \times \frac{252}{5} \times \left[\ln\left(\frac{BI_{t-2}}{BI_{t-7}}\right)\right]^2}$$

Where:

Subscript $_{(t)}$ refers to the relevant Index Business Day;
Subscript $_{(t-x)}$ refers to the x-th Index Business Day immediately preceding (but excluding) Index Business Day$_{(t)}$;
$BaseIndexRealizedVol_{date}^{\lambda}$ refers to the Base Index Exponentially Weighted Realized Volatility with a decay factor λ, as of date $_{(date)}$;
BI_{date} means the Base Index Value as of date$_{(date)}$; and
λ is the decay factor.

3. Calculation of the Underlying Asset Value

3.1. The Underlying Asset Value of the Money Market Position

The Underlying Asset Value of the Money Market Position is equal to the Money Market Position Value, which is calculated as set forth under "*Calculation of the Money Market Position – Calculation of the Money Market Position Value*" below.

$$A_{MoneyMarketPosition,t} = MMPV_t$$

3.2. The Underlying Asset Value of Other Underlying Assets

3.2.1. Calculation of the Underlying Asset Values of Other Underlying Assets

The Underlying Asset Value$_{(i)}$ of an Underlying Asset$_{(i)}$ on the Underlying Asset Base Date (as defined in the Annex) is equal to 100. On any Asset Business Day$_{(t)}$ following the Underlying Asset Base Date, the Underlying Asset Value$_{(i)}$ of Underlying Asset$_{(i)}$ is calculated according to the following formula:

(i)   If the Underlying Asset Currency (as specified in the section "*Overview of the Underlying Assets*" in the Annex) of such Underlying Asset is U.S. dollars:

$$A_{i,t} = A_{i,t-1} \times \frac{RL_{i,t}}{RL_{i,t-1}}$$

(ii)   Otherwise:

$$A_{i,t} = A_{i,t-1} \times \left[\frac{DFA_{i,t}^{USD}}{DFA_{i,t-1}^{USD}} - \left(\frac{CFA_{i,t}^{CCY}}{CFA_{i,t-1}^{CCY}} \times \frac{FX_{i,t}}{FX_{i,t-1}} \right) + \left(\frac{RL_{i,t}}{RL_{i,t-1}} \times \frac{FX_{i,t}}{FX_{i,t-1}} \right) \right]$$

Where:

Subscript $_{(t)}$ refers to the given Asset Business Day;
Subscript $_{(i)}$ refers to the given Underlying Asset;
Subscript $_{(t-1)}$ refers to the Asset Business Day immediately preceding (but not including) Asset Business Day$_{(t)}$;
Superscript $_{(CCY)}$ refers to the relevant currency;
$A_{i,date}$ means the Underlying Asset Value$_{(i)}$ of Underlying Asset$_{(i)}$ as of date$_{(date)}$;
$RL_{i,date}$ means the Reference Level of Underlying Asset$_{(i)}$ as of date$_{(date)}$;
$FX_{i,date}$ means the applicable Currency Exchange Rate for Underlying Asset $_{(i)}$ as of date$_{(t)}$;
$DFA_{i,date}^{USD}$ means the U.S. Dollar Financing Amount Level (determined as described under "*Calculation of the U.S. Dollar Financing Amount Level*") as of date$_{(date)}$; and
$CFA_{i,date}^{CCY}$ means the Currency Financing Amount Level (determined as described under "*Calculation of the Currency Financing Amount Levels*") for the currency in which the non-U.S. dollar denominated Index Component$_{(i)}$ is denominated as of date$_{(date)}$.

Note: If on any day the U.S. Dollar Financing Amount Level or the Currency Financing Amount Level is zero, the Index Committee may determine in its sole discretion to instruct the Calculation Agent to calculate the Underlying Asset Value using an alternative formula.

3.2.2. Calculation of the U.S. Dollar Financing Amount Level

The U.S. Dollar Financing Amount Level has an initial value of 100 as of the U.S. Dollar Financing Amount Base Date (as defined in the Annex).

On any calendar date $_{(t)}$ that is not a Saturday or Sunday following the U.S. Dollar Financing Amount Base Date, the "**U.S. Dollar Financing Amount Level**" will be calculated according to the following formula:

$$DFA_t^{USD} = DFA_{NRt}^{USD} \times \left(1 + NIR_{NRt} \times DCF_{NRt,t}\right)$$

Where:

Subscript $_{(t)}$ refers to the given calendar day that is not a Saturday or Sunday;
Subscript $_{(NRt)}$ refers to the Notional Interest Rate Reset Day (as defined in the Annex) immediately preceding day$_{(t)}$;
$DFA_t{}^{USD}$ means the U.S. Dollar Financing Amount Level as of date$_{(t)}$;
$DFA_{NRt}{}^{USD}$ means the U.S. Dollar Financing Amount Level as of date$_{(NRt)}$;
NIR_{NRt} means the Notional Interest Rate as of date$_{(NRt)}$; and
$DCF_{NRt,t}$ is the day count fraction for the period from (but excluding) date$_{(NRt)}$ to (and including) date$_{(t)}$, determined by using the USD Rate Day Count Convention (as specified in the Annex).
Note: If on any day the level is equal to or less than zero, the level shall be deemed to be zero on such day and for all future days.

3.2.3. Calculation of the Currency Financing Amount Levels

The Currency Financing Amount Level of each of the relevant currencies has an initial value of 100 as of the Currency Financing Amount Base Date (as specified in the Annex).

On any calendar date$_{(t)}$ that is not a Saturday or Sunday following the Currency Financing Amount Base Date, the "**Currency Financing Amount Level**" for each of the relevant currencies will be calculated according to the following formula (on the Currency Financing Amount Base Date, the level is 100):

$$CFA_t^{CCY} = CFA_{CRt}^{CCY} \times \left(1 + R_{CRt}^{CCY} \times DCF_{CRt,t}^{CCY}\right)$$

Where:

Subscript $_{(t)}$ refers to the given calendar day that is not a Saturday or Sunday;
Subscript $_{(CRt)}$ refers to the Currency Financing Amount Rate Reset Day (as specified in the Annex) immediately preceding day$_{(t)}$;
Superscript $_{(CCY)}$ refers to the relevant currency;

CFA_t^{CCY} means the Currency Financing Amount Level of the relevant currency as of the date$_{(t)}$;
CFA_{CRt}^{CCY} means the Currency Financing Amount Level of the relevant currency as of date$_{(CRt)}$;
R_{CRt}^{CCY} means the Currency Financing Amount Rate of the relevant currency as of date$_{(CRt)}$; and
$DCF_{CRt,t}^{CCY}$ is the day count fraction for the period from (but excluding) date$_{(CRt)}$ to (and including) date$_{(t)}$, determined by using the Currency Financing Amount Rate Day Count Convention of the relevant currency (as specified in the Annex).
Note: If on any day the level is equal to or less than zero, the level shall be deemed to be zero on such day and for all future days.

3.3. Calculation of the Money Market Position

The Money Market Position is intended to express the notional returns accruing to a hypothetical investor from an investment in a notional overnight money account denominated in U.S. dollars that accrues interest at a rate determined by reference to the Notional Interest Rate (Fed Fund Rate, determined as specified in the Annex). The Money Market Position will have a positive notional return if the Notional Interest Rate is positive.

3.3.1. Calculation of the Money Market Position Value

The value of the Money Market Position (the "**Money Market Position Value**") is equal to 100 on the Money Market Base Date (as defined in the Annex). On any Asset Business Day$_{(t)}$ following the Money Market Base Date, the Money Market Position Value will be calculated according to the following formula:

$$MMPV_t = MMPV_{IRt} \times \left(1 + R_{IRt} \times DCF_{IRt,t}\right)$$

Where:

Subscript $_{(t)}$ refers to the given calendar date;
Subscript $_{(IRt)}$ refers to the Notional Interest Rate Reset Day immediately preceding calendar date$_{(t)}$;
$MMPV_t$ means the Money Market Position Value as of date$_{(t)}$;
$MMPV_{IRt}$ means the Money Market Position Value as of date$_{(IRt)}$;
R_{IRt} means the Notional Interest Rate as of date$_{(IRt)}$; and
$DCF_{IRt,t}$ is the day count fraction for the period from (but excluding) date$_{(IRt)}$ to (and including) date$_{(t)}$, determined by using the USD Rate Day Count Convention (as specified in the Annex).
Note: If on any day the value is equal to or less than zero, the value shall be deemed to be zero on such day and for all future days.

Historical Data

The "**Launch Date**" for the Index, which is the date the Calculation Agent began calculating the Index, is specified in the Annex. Therefore, historical information provided for the period from the Index Base Date until the Launch Date is hypothetical and is provided as an illustration of how the Index would have performed during the period had the Calculation Agent begun calculating the Index on the Index Base Date using the Methodology. This data does not reflect actual performance, nor was a contemporaneous investment model run of the Index. Historical information for the period from and after the Launch Date is based on the actual performance of the Index.

Historical levels of the Index are calculated with reference to the Reference Levels of the Underlying Assets determined based on the latest available data published by the relevant Underlying Asset Sponsors (as specified in the Annex).

Market Disruption Events

A "**Market Disruption Event**" may be deemed by the Index Committee to have occurred in any of the following situations:

(i)   The official closing price, level, rate or other measure of any Index Constituent is unavailable on any relevant day on which such measure is scheduled to be published (including cases where a member of the Goldman Sachs Group is the Index Component Sponsor, publisher or benchmark provider of an Index Constituent);

(ii)   a relevant Exchange is not open for trading during its regular trading session, or closes prior to its scheduled closing time, on any relevant day or there is a material Exchange Disruption (as determined by the Calculation Agent);

(iii)   upon the occurrence or existence of a Trading Disruption, for more than two hours of trading, or at any time during the one-hour period that ends at the scheduled closing time of the relevant Exchange;

(iv)   upon the occurrence or existence of an Index Dislocation;

(v)   upon the occurrence or existence of a Force Majeure Event;

(vi)   upon the occurrence or existence of a Currency Exchange Rate Disruption Event; or

(vii)   upon the occurrence or existence of an Interest Rate Disruption Event.

A "**Trading Disruption**" means any suspension of or limitation imposed on trading by the relevant Exchange, and whether by reason of movements in price exceeding limits permitted by the relevant reference exchange or otherwise, relating to any component of an Index Component.

An "**Exchange Disruption**" means any event that disrupts or impairs (as determined by the Calculation Agent in consultation with the Index Committee) the ability of market participants in

general to effect transactions in, materially increases the costs of transacting in, or obtain market values for, any Index Component or its underlying constituents on the relevant Exchange.

"**Exchange**" means the relevant exchanges on which the components of the Index Components are traded as set forth in the Annex.

An "**Index Dislocation**" means the Calculation Agent (in consultation with the Index Committee) determines that a market participant, as a result of a market-wide condition relating to the Index or any Index Constituent would (i) be unable, after using commercially reasonable efforts, to acquire, establish, re-establish, substitute, maintain, unwind, or dispose of all or a material portion of any hedge position relating to the Index or an Index Constituent, or (ii) incur a materially increased cost in doing so, including due to any capital requirements or other law or regulation.

A "**Force Majeure Event**" means the Calculation Agent determines that there has been the occurrence of a systems failure, natural or man-made disaster, act of God, armed conflict, act of terrorism, riot or labor disruption or any similar intervening circumstance that is beyond the reasonable control of the Index Sponsor, Calculation Agent or any of their respective affiliates that the Calculation Agent determines is likely to have a material effect on an Index Constituent, or on its ability to perform its role in respect of the Index.

"**Currency Exchange Rate Disruption Event**" means (and a Currency Exchange Rate Disruption Event shall be deemed to have occurred if):

(i) in respect of a Currency Exchange Rate and a relevant day:

  a) such currency exchange rate splits into dual or multiple currency exchange rates;

  b) the currency exchange rate specified in the Annex is not published on a date on which it is scheduled for publication and the Calculation Agent is unable to determine (after consultation with the Index Committee) any commercially reasonable substitute;

  c) an event has occurred in or affecting any relevant jurisdiction that generally makes it impossible to deliver (1) a relevant currency (as specified in the Annex) from accounts inside such jurisdiction to accounts outside such jurisdiction, or (2) a relevant currency (as specified in the Annex) between accounts inside such jurisdiction for the applicable reference currency or to a party that is a non-resident of such jurisdiction; or

  d) the applicable reference currency ceases to exist and has not been replaced by a new currency; and

(ii) in respect of a Currency Financing Amount Rate and a relevant day:

  a) such Currency Financing Amount Rate is not published on a date on which it is scheduled for publication; or

b) such Currency Financing Amount Rate is no longer published.

"**Interest Rate Disruption Event**" means (and an Interest Rate Disruption Event shall be deemed to have occurred if), in respect of the Notional Interest Rate and a relevant day:

(a) such Notional Interest Rate is not published on a date on which it is scheduled for publication; or

(b) such Notional Interest Rate is no longer published.

On any Index Business Day which corresponds to the first day of a given Market Disruption Event, the Calculation Agent shall postpone calculation of the Index Value to the next Index Business Day on which no Market Disruption Event is occurring or continuing and which is not an Additional Index Holiday, and an indicative level for the Index may be published. Such level will be identified as a "disrupted indicative level." The Calculation Agent shall resume calculating and publishing the Index Value for the first Index Business Day on which no Market Disruption Event is occurring or continuing and which is not an Additional Index Holiday, as determined by the Index Committee. An Index Business Day will be deemed not to occur on a business day if a Market Disruption Event is continuing (as opposed to occurring for the first time). Besides, an Additional Index Holiday will be deemed to occur on the first day on which there is no Market Disruption Event occurring or continuing after such Market Disruption Event and which is an Asset Business Day for all of the Underlying Assets. The Calculation Agent, in consultation with the Index Committee, may use the Currency Financing Amount Rate or Notional Interest Rate in effect prior to such market disruption during the period of any market disruption event with respect to a Currency Financing Amount Rate. On the sixth New York business day following the occurrence of a Market Disruption Event with respect to any Index Constituents, if such Market Disruption Event is continuing and the affected Index Constituents have not been removed from the Index, the Index Committee may determine in its sole discretion to instruct the Calculation Agent to calculate the Index, using a price for such Index Constituents as determined by the Index Committee in its sole discretion. In the event the Index Committee determines on such sixth New York business day, in its sole discretion, that no such instructions should be given to the Calculation Agent, the Index Committee may revisit such determination on any business day thereafter on which the Market Disruption Event is continuing.

Revision to Index Values in the Event of Data Error

If the Calculation Agent determines that the price made available for an Index Constituent (or the published level of a Notional Interest Rate, Currency Exchange Rate or Currency Financing Amount Rate) reflects a manifest error, the calculation of the Index shall be delayed until such time as a corrected price or level is made available. In the event a corrected price or level with respect to an Index Constituent is not made available on a timely basis, or in the event that the price made available for an Index Constituent is subsequently corrected and such correction is published, then the Calculation Agent may, if practicable, adjust or correct the relevant calculation or determination, including the level of the Index Constituent, as of any Index Business Day to take into account such correction.

On any Index Business Day during which the price, level or rate of an Index Constituent reflects such an error (and such error has not been corrected), the Underlying Asset Weights, Volatility Control Exposure and the Momentum Risk Control Exposure will be calculated using the price, level or rate made available by the relevant sponsor, publisher or provider of such Index Constituent (an "**Index Constituent Sponsor**") (notwithstanding any manifest error). If the relevant Index Constituent Sponsor subsequently corrects the price it has made available, the Index Value may be calculated using such corrected price, but the quantities of Index Constituents implied by the Underlying Asset Weights, Volatility Control Exposure and the Momentum Risk Control Exposure (prior to the error being corrected) may or may not be adjusted by the Index Committee.

Changes to the Index Constituents

The designated Index Components, Cash Position Components, Currency Financing Amount Rates (as defined in the Annex), Currency Exchange Rates and the Notional Interest Rate (or a stock, government bond instrument or other market measure underlying such Index Constituent, or option or futures contract related thereto, which the Index Committee determines is necessary to effectively replicate its performance) (collectively, the "**Index Constituents**" and each an "**Index Constituent**"), are not expected to be changed or replaced. However, if the Index Committee determines that any of the following events has occurred:

- the Index Component Sponsor (as described in the Annex under "*Overview of Underlying Assets*" in the Annex) of an Index Component announces that it will make a material change in the formula for or the method of calculating such Index Component (or the selection of the components thereof) or otherwise materially modifies such Index Component (or the selection of the components thereof) for the purpose of maintaining such Index Component;

- an Index Component is no longer published by its Index Component Sponsor;

- an Index Component, its constituents or derivative instruments linked thereto, are no longer tradable on commercially reasonable terms (as determined by the Calculation Agent in consultation with the Index Committee) in light of changes to financial market conditions (including market liquidity), regulatory or similar factors;

- any third-party Index Component Sponsor of an Index Component terminates its license with the Index Sponsor and its affiliates such that the Index Sponsor may not use the Index Component or any related index in connection with any financial product or index;

- the Index Sponsor and its affiliates cease to have the relevant data license in respect of an Index Component;

- the applicable Currency Exchange Rate, related currency or Currency Financing Amount Rate ceases to exist; or

- the Notional Interest Rate ceases to exist,

then the affected Index Constituent will be replaced by a successor constituent that, in the determination of the Index Committee in its sole discretion, most closely replicates, in the case of an index, the constituents and method of calculation of the Index Component, or, with respect to a successor interest or exchange rate, most closely captures the relevant market measure and satisfies any other criteria of an effective benchmark identified by the Index Committee, and the Index Sponsor may use such constituent as a successor Index Constituent. If the Index Committee determines in its sole discretion that no successor constituent exists, such Index Constituent will be removed from the Index.

Such deletions and substitutions may be undertaken on any date. The effective date will be determined at the discretion of the Index Committee and may be applied retroactively (although the Index Committee will seek to announce any such deletions or substitutions as promptly as is reasonably practicable), and will be reflected in an updated version of this Methodology. The Index Committee may permit the use of a temporary Index constituent until a permanent successor Index Constituent is identified.

Publication of Changes to the Index and to the Methodology

Changes to the components of the Index made by the Calculation Agent or, in certain cases, the Index Committee, will be publicly announced as promptly as is reasonably practicable and normally at least five Index Business Days prior to the effective date of the changes. Changes to the Methodology made by the Index Committee will be publicly announced at least 60 New York business days prior to their effective date. Adjustments made by the Calculation Agent in response to market adjustment events and potential adjustment events will be publicly announced as promptly as is reasonably practicable. Notwithstanding the foregoing, the Index Committee may modify the Index (including its composition), the Methodology or any data obtained from a third party, in its sole discretion and without notice to correct any manifest error, or to cure or correct any ambiguity, contradiction or defect, in the description or operation of the Index.

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STS Group

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Calculation Agent Website

http://www.solactive.com/

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The US Equity Futures Rolling Strategy Index, US Government Bond Futures Rolling Strategy Index, Japanese Equity Futures Rolling Strategy Index, Japanese Government Bond Futures

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ANNEX

Index Base Date	3 August 2020
Base Index Base Date	6 January 2020
Volatility Controlled Index Base Date	17 January 2020
Underlying Asset Base Date	30 April 2013
Launch Date	12 January 2021
Index Bloomberg Ticker	GSMBFC5 Index
Index Reuters Ticker	.GSMBFC5
Index Business Day	Each day which is an Asset Business Day for all of the Underlying Assets and on which no Market Disruption Event is continuing, and such day is not an Additional Index Holiday (as described in *"Rebalancing; Impact of Disruptions"*). For the avoidance of doubt, for purposes of this definition of "Index Business Day", a Market Disruption Event is not deemed to be continuing on the first day such Market Disruption Event occurs.
Asset Business Day	In respect of (i) the Money Market Position, a calendar day that is not a Saturday or Sunday; (ii) any other Underlying Asset: each day which is a business day for the associated Index Component according to the holiday calendar of such associated Index Component (see "Additional Information" as specified in "Overview of Underlying Assets" in the Annex)
Reference Level	In respect of each Underlying Asset, on any given calendar day in respect of such Underlying Asset, the closing level of the relevant Underlying Asset as published by the relevant Underlying Asset Sponsor or Underlying Asset Data Sponsor in respect of such calendar day.

Volatility Control Level	5%
Deduction Rate	0.65% per annum
Money Market Base Date	January 10, 1994
Notional Interest Rate	USD-FEDERAL-FUNDS-H15 (as provided by Reuters on page FEDFUNDS1 or by another recognized source used for the purpose of displaying such rate). For any given calendar day which is not a scheduled publication day for the Notional Interest Rate, the Calculation Agent will use for such calendar day the Notional Interest Rate for the scheduled publication day immediately preceding such calendar day.
Notional Interest Rate Reset Day	Each day which is a New York business day
USD Rate Day Count Convention	Actual/360, meaning the number of days in the relevant period divided by 360.

"Currency Financing Amount Rates" and "Currency Financing Amount Business Days"	Currency	Currency Financing Amount Rate	Currency Financing Amount Rate Business Days	Currency Financing Amount Rate Day Count Convention	Currency Financing Amount Base Date
	EUR	On or before December 31, 2021, EUR-EONIA (as provided by Reuters on EONIA RSF.REC.EONIA=.NaE or another recognized source, as determined by the Calculation Agent, used for the purpose of displaying such rate). On or after January 3, 2022, 8.5bps + €STR (as provided by Reuters on EUROSTR= or another recognized source, as determined by the Calculation Agent, used for the purpose of displaying such rate).	Business days as per TARGET system	Actual/360, meaning the number of days in the relevant period divided by 360	January 4, 1999
	JPY	JPY-BOJ-TONAT (as provided by Reuters on RSF.REC.JPONMU=RR.NaE or another recognized source, as determined by the Calculation Agent, used for the purpose of displaying such rate)	Business days in Tokyo	Actual/365 Fixed, meaning the number of days in the relevant period divided by 365	December 3, 2004

For any given calendar day which is not Currency Financing Amount Rate Business Day, the Calculation Agent will use the level of such Currency Financing Amount Rate published for the Currency Financing Amount Rate Business Day immediately preceding such calendar day.

Currency Financing Amount Rate Reset Day	In respect of a Currency Financing Amount Rate, each day which is a Currency Financing Amount Rate Business Day
"U.S. Dollar Financing Amount Base Date"	January 10, 1994

Currency Exchange Rate	**One JPY into USD:** The 4 p.m. London time closing spot mid rate for converting one unit of Japanese yen into US dollar as published by WM Performance Services or any successor company.
	One EUR into USD: The 4 p.m. London time closing spot mid rate for converting one unit of Euro into US dollar as published by WM Performance Services or any successor company.
	The days on which the Currency Exchange Rates are usually fixed and published, as determined by the Calculation Agent, by WM Performance Services or any successor company are referred to herein as "**Fixing Days**".
	If any calendar day is not a Fixing Day, the Calculation Agent will use the level of the relevant Currency Exchange Rate published for the applicable Fixing Day immediately preceding such calendar day.
	If any calendar day is a Fixing Day but the applicable Currency Exchange Rate is not available on such day at the applicable time indicated above, the Calculation Agent (after consultation with the Index Committee) shall determine the Currency Exchange Rate in a commercially reasonable manner.

OVERVIEW OF THE UNDERLYING ASSETS

Underlying Asset	Return Type	Underlying Asset Currency	Underlying Asset Sponsor	Bloomberg/Reuters Page	Index Calculation Agent	Reference Exchange	Futures Contracts	Minimum Weight	Maximum Weight	Asset Class Group	Asset Class Minimum Weight	Asset Class Maximum Weight	Additional Information
US Equity Futures Rolling Strategy Index ("US Large-Cap Equities")	Total Return	USD	Goldman Sachs International	FRSIUSE Index	S&P Dow Jones LLC	Chicago Mercantile Exchange	E-mini S&P 500® Index futures contracts	0.0%	30.0%	Focused U.S. Equities	20%	50%	Appendix 1
US Technology Equity Futures Rolling Strategy Series Q Total Return Index ("US Technology Equities")	Total Return	USD	Goldman Sachs International	GSISNQET Index	Goldman Sachs International	Chicago Mercantile Exchange	E-mini NASDAQ 100 Stock Index futures contracts	0.0%	30.0%				Appendix 2
European Equity Futures Rolling Strategy Index	Total Return	EUR	Goldman Sachs International	FRSIEUE Index	STOXX Limited	Eurex	Dow Jones EURO STOXX 50® Index futures contracts	0.0%	30.0%	Other Developed Market Equities	0%	50%	Appendix 3
Japanese Equity Futures Rolling Strategy Index	Total Return	JPY	Goldman Sachs International	FRSIJPE Index	S&P Dow Jones LLC	Osaka Securities Exchange	TOPIX® Stock Price Index futures contracts	0.0%	30.0%				Appendix 4
US Government Bond Futures Rolling Strategy Index	Total Return	USD	Goldman Sachs International	FRSIUSB Index	S&P Dow Jones LLC	Chicago Mercantile Exchange	Futures contracts on government bonds of the USA	0.0%	60.0%	Developed Market Fixed Income	0%	80%	Appendix 5
European Government Bond Futures Rolling Strategy Index	Total Return	EUR	Goldman Sachs International	FRSIEUB Index	S&P Dow Jones LLC	Eurex	Futures contracts on federal bonds of the Federal Republic of Germany	0.0%	60.0%				Appendix 6
Japanese Government Bond Futures Rolling Strategy Index	Total Return	JPY	Goldman Sachs International	FRSIJPB Index	S&P Dow Jones LLC	Osaka Securities Exchange	Futures contracts on government bonds of Japan	0.0%	60.0%				Appendix 7
Emerging Markets Equity Futures Rolling Strategy Index	Total Return	USD	Goldman Sachs International	FRSIEME Index	S&P Dow Jones LLC	ICE Futures U.S.	MSCI Emerging Markets futures contracts	0.0%	20.0%	Emerging Market Equities	0%	20%	Appendix 8
Bloomberg Gold Subindex Total Return	Total Return	USD	Bloomberg	BCOMGCTR Index	Bloomberg	Trading Facilities* of the Commodity Contracts included in the Bloomberg Gold Subindex Total Return	Commodity Contracts included in the Bloomberg Gold Subindex Total Return	0.0%	25.0%	Commodities	0%	25%	https://www.bloomberg.com/professional/product/indices/bloomberg-commodity-index-family/
Money Market Position**	Total Return	USD	N/A	N/A	N/A	N/A	N/A	0%	80%	Cash Equivalent	0%	80%	N/A

* **"Trading Facility"** means, in respect of a relevant Commodity Contract, the exchange or trading facility or principal trading market on which such Commodity Contract is traded, or any successor to such exchange or trading facility or principal trading market to which trading in such Commodity Contract has temporarily relocated, as determined by the Index Calculation Agent.

**As described in the Methodology.