J.P. Morgan Bespoke Commodity Index
Standard Terms

February 2011
1. An Introduction to the J.P. Morgan Bespoke Commodity Index Standard Terms

The J.P. Morgan Bespoke Commodity Index Standard Terms is a methodology developed by J.P. Morgan that applies a long, short or long-short strategy to various Constituents (each such strategy, an “Index” or “Bespoke Index” and collectively, the “Indices” or “Bespoke Indices”). Indices that incorporate the J.P. Morgan Bespoke Commodity Index Standard Terms may seek to track exposure to (a) an index or basket of indices, (b) the difference between two indices, which we refer to as Components, or a basket of Components with either static or dynamic weights for such Components or (c) some other strategy that will be set forth in the relevant Index Supplement. Each Index will either be an Excess Return or Total Return Index, and the Index Type will be specified in the Index Supplement. Please see “Disclaimers and Conflicts of Interest” as set forth in these Standard Terms.

2. This Document

This document, the J.P. Morgan Bespoke Commodity Index Standard Terms (the “Standard Terms”), sets forth the framework for each J.P. Morgan Bespoke Commodity Index (the “Indices” or “Bespoke Indices”).

This document should be read in conjunction with the specific Index Supplement for any Bespoke Index. This document explains index construction in a general form, with certain concepts or particulars left unspecified (for example, the Index Supplement will specify the Constituents of the relevant Bespoke Index and the applicable Component Weights). The Index Supplement will be used to specify these index specific terms, and when read together with the Standard Terms, the Index Supplement and the Standard Terms will constitute the “Index Rules.” Each Bespoke Index shall have an Index Supplement, which incorporates these Standard Terms, and sets out the Index Name and any additional terms or details required by the Index Calculation Agent to determine the Index Level.

For the avoidance of doubt, the Index Supplement may include a provision, formula or definition, and such provision, formula or definition will supersede and replace any provision, formula or definition set forth herein for the purpose of calculating the Index or Indices described in that specific Index Supplement.

This document may be amended or supplemented from time to time at the discretion of the Index Calculation Agent and will be re-published no later than thirty (30) calendar days following such amendment or supplement.

This document is published by J.P. Morgan Securities, Ltd. (“JPMSL”) of 125 London Wall, London EC2Y 5AJ, United Kingdom, in its capacity as the Index Sponsor. A copy of this document is available from the Index Calculation Agent (as defined in the Index Supplement) or the Index Sponsor.

ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE DISCLAIMERS AND CONFLICTS SECTIONS SET OUT AT THE END OF THIS DOCUMENT AND CONSIDER THE INFORMATION CONTAINED IN THIS DOCUMENT IN LIGHT OF SUCH DISCLAIMERS AND CONFLICTS OF INTEREST.

NOTHING HEREIN CONSTITUTES AN OFFER TO BUY OR SELL ANY FINANCIAL PRODUCT, PARTICIPATE IN ANY TRANSACTION OR ADOPT ANY INVESTMENT STRATEGY OR LEGAL, TAX, REGULATORY OR ACCOUNTING ADVICE. SEE SECTION 8.2 HEREIN.

Each of JPMSL and its affiliates may have positions or engage in transactions in securities or other financial instruments based on or indexed or otherwise related to the Bespoke Indices.

3. Definitions

Capitalised terms used in this document should be interpreted according to the definitions given below. In many cases there is a further explanation of the term or concept in the body of this document. All
capitalised terms in the Index Supplement shall be deemed to have the same meaning in this document unless otherwise specified in the Index Supplement. In the event of a conflict between definitions used in the Index Supplement and this document, the term set forth in the Index Supplement will prevail.

Unless otherwise specified, references to “Sections” in this document shall mean sections in this document.

The following terms are defined as follows:

**Bloomberg Page:** With respect to any Index, the Index Supplement will identify a ticker symbol that will reference an electronic page published by Bloomberg L.P. or one of its affiliates.

The Bloomberg Page will be specified in the relevant Index Supplement.

**Calculation Day:** Any day on which the New York Stock Exchange is scheduled to be open for trading for its regular trading session, without regard to after hours trading or any other trading outside of the regular trading session hours.

**Change in Law means:** (a) due to:

(i) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); or

(ii) the promulgation of, or any change in, the interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law, rule, regulation or order (including, without limitation, as implemented by the U.S. Commodity and Futures Trading Commission or any exchange or trading facility),

in either case, the Index Calculation Agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Constituent of the relevant Index, any transaction referencing the Constituent or any component of the Constituent (including without limitation, commodities futures contracts) or, (y) holding a position in any Constituent of the relevant Index, any transaction referencing the Constituent or any component of the Constituent (including without limitation, commodity futures) is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule, regulation in relation to such Constituent, transaction referencing the Constituent or component of the Constituent traded on any exchange(s) or other trading facility (including, without limitation, any relevant exchange); or

(b) the occurrence or existence of any:

(i) suspension or limitation imposed on trading futures contracts (relating to any Constituent, any transaction
referencing the Constituent or any component of the Constituent) including without limitation, commodities futures contracts; or

(ii) any other event that causes trading in futures contracts (relating to any Constituent, any transaction referencing the Constituent or any component of the Constituent) to cease including without limitation, commodities futures contracts.

Component(s): The Index will be comprised of one or more Components set forth in the relevant Index Supplement. Each Component will be composed of either one (1) Constituent (which may have a Market Position of Long or Short) or two (2) Constituents (one of which will have a Market Position of Long and the other of which will have a Market Position of Short). Each Component will have a Component Weight. Components will be enumerated 1 to n in the relevant Index Supplement where “n” is the number of Components in the Index, and the ith Component will be referred to as Component i.

Each of the Components will be specified in the relevant Index Supplement.

Component Weight(s): With respect to each Component, the applicable Component Weight for that Component will be specified as a percentage in the relevant Index Supplement. Component Weight, refers to the Component Weight for Component i. For the avoidance of doubt, the sum of the Component Weights for all Components in the Index need not be 100%.

The Component Weight for each Component i, including any formula for calculating such Component Weight, will be specified in the relevant Index Supplement. For the avoidance of doubt, the Component Weight(s) may be negative, which indicates that the Index is short the value of such Component (regardless of whether a Constituent in that Component is a Long Constituent). For example, a Component that has a negative Component Weight will essentially be short a Long Constituent.

Constituent(s): Each Constituent will be a commodity index (known as the “Underlying Index” of the Constituent). Each Constituent, as specified in the relevant Index Supplement, will be associated with one or more Components. Each Constituent in a particular Component will have an associated Market Position of either Long or Short.

Each of the Constituents of a Component i will be specified in the relevant Index Supplement.

For the avoidance of doubt, an Underlying Index may appear as a Constituent associated with more than one Component in the same Index (e.g., the S&P GSCI™ Corn Excess Return Index could appear as the Short Constituent in one Component paired with the JPMCCI Corn Excess Return Index, and the S&P GSCI™ Corn Excess Return Index could also be paired in another Component with the J.P. Morgan Seasonal Corn Index-Excess Return). In such a case, Constituents associated with different Components remain distinct Constituents, even though they relate to the same Underlying Index. In particular,
Market Disruption Events may affect such Constituents differently because they are associated with distinct Components.

**Disrupted Commodity:** Disrupted Commodity will have the meaning set forth in Section 6.5 (*Disruption of Constituents with more than one Underlying Commodity*).

**Disrupted Day:** will have the meaning set forth in the definition of “Market Disruption Event.”

**Extraordinary Event:** Extraordinary Events means each of the events set forth in Section 7 (*Extraordinary Events*) of these Standard Terms.

**Final Adjusted Level:** The Final Adjusted Level will have the meaning set forth in Section 6.3 (*Time Frame of Various Calculation Agent Determinations*).

**Index:** means an Index composed of the Components specified in the relevant Index Supplement.

The name of the Index will be specified in the relevant Index Supplement.

**Index Calculation Agent:** Unless otherwise specified in the Index Supplement, J.P. Morgan Securities Ltd. or any of its successors or assigns.

**Index Inception Date:** With respect to any Index, the date specified in the relevant Index Supplement. For any Index for which the Initial Index Level is not 100.0000, the Index Supplement will specify the Initial Index Level.

**Index Leverage(RDn):** The overall leverage applied to the Index on Rebalancing Date n as determined in accordance with the provisions and/or formula set forth in the relevant Index Supplement.

**Index Level (t):** means, with respect to the Index and a Calculation Day t, the nominal level of the Index, which the Index Calculation Agent will calculate in respect of each such Calculation Day t in accordance with the provisions set forth in Section 4 (*Calculation and Determination of the Index Level*) of these Standard Terms and publish such Index Level (t) on the immediately following Calculation Day t+1 in accordance with the provisions set forth in Section 5 (*Publication of the Index Level*) of these Standard Terms.

For the avoidance of doubt, the Index Supplement may provide alternative provisions for calculating and determining the Index Level and such provisions as set forth in the Index Supplement will govern the calculation, determination and publication of the Index Level.

Notwithstanding anything to the contrary, if a Market Disruption Event has occurred or is continuing on such Calculation Day t or occurred on the immediately prior Rebalancing Date n-1, the Index Calculation Agent may adjust the Index Level with respect to Calculation Day t, for the purposes of calculating amounts set forth herein in accordance with the Disruption Fallbacks set forth in Section 6 (*Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event*) to these Standard Terms.
For the avoidance of doubt, the Index Calculation Agent will publish the Index Level \( t \) (subject to the provisions set forth in Section 5 (Publication) in accordance with the formulas set forth in Section 4 (Calculation and Determination of the Index Level) to these Standard Terms, rounding the Index Level \( t \) published on such Calculation Day \( t \) to the fourth decimal place; \textit{provided, however} that if a Market Disruption Event has occurred or is continuing on such Calculation Day \( t \) or occurred on the immediately prior Rebalancing Date \( n-1 \), the Index Calculation Agent will calculate the Index Level \( t \) in accordance with the Disruption Fallbacks set forth in Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) to these Standard Terms. \textbf{The Index Level, as published, may not be tradable.} Furthermore, such published Index Level will only be subsequently revised in certain limited circumstances (such as manifest error) and will not be subsequently revised solely because such Calculation Day \( t \) was a Disrupted Day. The Index Calculation Agent may calculate the Index Level \( t \) with respect to any Calculation Day to greater specificity for internal purposes and any rounding in publication will be based on the internally calculated price with respect to such Calculation Day, which is determined without regard to any rounding, except such rounding as described in Section 4 (Calculation and Determination of the Index Level) to these Standard Terms.

### Index Rebalancing:

The Index will be rebalanced on each Rebalancing Date. If a Market Disruption Event has occurred or is continuing on a Rebalancing Date with respect to any Constituent within the Index, the Rebalancing Date will not be postponed, and the Rebalancing Date will be the originally scheduled Rebalancing Date; the Index Level, however, will be determined in accordance with Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) to these Standard Terms.

On each Rebalancing Date, the Index Calculation Agent will rebalance the Index based on its Components and Component Weights, apply Volatility Matching, if applicable, to any Short Constituents within a Component and apply Volatility Targeting, if applicable, to the Index.

### Index Sponsor:

With respect to each Constituent, the corporation or other entity that (a) is responsible for setting and reviewing the rules and procedures and the methods of calculation and adjustments, if any, related to the Constituent and (b) announces (directly or through an agent) the level of the Constituent on a regular basis; and with respect to any Bespoke Index, JPMSL or its successors or assigns.

### Index Type:

With respect to each Index, the relevant Index Supplement will specify whether the Index is an excess return index or a total return index. If a Market Disruption Event has not occurred or is not continuing, the Index Level will be calculated in accordance with Section 4.6 (Calculations for an Excess Return Index on each Calculation Day \( t \)) for any Index that is an excess return index and the Index Level will be calculated in accordance with Section 4.7 (Calculations for a Total Return Index on each Calculation Day \( t \)) for any Index that is a total return index.
**IndexVol(RDn):** With respect to Volatility Targeting, a measurement of the hypothetical realized volatility that the Index would have had, over period(s) preceding the nth Rebalancing Date.

**Initial Adjusted Level:** The Initial Adjusted Level will have the meaning set forth in Section 6.3 (*Time Frame of Various Calculation Agent Determinations*).

**Initial Index Level:** Unless otherwise specified in the relevant Index Supplement, 100.0000.

**Interim Adjusted Level:** The Interim Adjusted Level will have the meaning set forth in Section 6.3 (*Time Frame of Various Calculation Agent Determinations*).

**Long Constituent(s):** means any Constituent specified in the relevant Index Supplement with a Long Market Position.

The delineation of whether a Constituent is a Long Constituent will be specified in the relevant Index Supplement.

**Market Disruption Events:** means, with respect to any Calculation Day:

(i) A material limitation, suspension, discontinuation or disruption of trading in one or more options or futures contracts on a relevant commodity or commodities related to the Underlying Index of a Constituent, which results in failure by the Relevant Exchange on which such option(s) and/or futures contract(s) is/are traded to report an official settlement price for such option(s) and/or futures contract(s) on the day on which such event occurs or any succeeding day on which it continues;

(ii) a limitation, suspension or disruption of trading in one or more options or futures contracts on a relevant commodity or commodities related to the Underlying Index of a Constituent, by reason of movements exceeding “limit up” or “limit down” levels permitted by the Relevant Exchange and which, in the opinion of the Index Calculation Agent, is material to trading volume and market conditions in such option(s) or futures contract(s) on such Calculation Day;

(iii) publication by the Relevant Exchange of a “limit price” as the official settlement price for any futures contract on the relevant commodity or commodities related to the Underlying Index of a Constituent (by reason of movements exceeding “limit up” or “limit down” levels permitted by the relevant exchange);

(iv) the occurrence of a Non-Publication Event; or

(v) the Relevant Exchange for futures contracts on the relevant commodity or commodities related to the Underlying Index of a Constituent is not open for trading during its regular trading session, regardless of whether any such exchange closes prior to its scheduled closing time (a “Non-Commodity Business Day”).
A Market Disruption Event for a Constituent shall also constitute (a) a Market Disruption Event for any Component of which that Constituent is a part and (b) a Market Disruption Event for any Index that includes any Component of which that Constituent is a part.

Any Calculation Day on which a Market Disruption Event occurs or is continuing (such day, a “Disrupted Day”) for a Constituent shall be a Disrupted Day for that Constituent and a Disrupted Day for any Component of which that Constituent is a part and a Disrupted Day for any Index that includes any Component of which that Constituent is a part.

Market Position: The Market Position refers to the direction of exposure to each Constituent (either “Long” or “Short”). For a Long Constituent, the Market Position of that Constituent is “Long”. For a Short Constituent, the Market Position of that Constituent is “Short”.

If the Index is “Long” a specific Constituent, then the Index will benefit from a positive return in the Constituent, and if the Index is “Short” a specific Constituent, then the Index will benefit from a negative return in the Constituent.

For the avoidance of doubt, the Market Position is determined with respect to the Constituent and irrespective of the Component Weight.

Maximum Index Leverage: A positive percentage as specified in the relevant Index Supplement.

Maximum Short Constituent Leverage: With respect to Component i, a positive percentage as specified in the relevant Index Supplement.

Period-To-Date Component Performance will have the meaning set forth under Section 4 (Calculation and Determination of the Index Level) to these Standard Terms.

Minimum Index Leverage: A non-negative percentage, less than or equal to the Maximum Index Leverage, as specified in the relevant Index Supplement.

Minimum Short Constituent Leverage: With respect to Component i, a percentage that is less than the Maximum Short Constituent Leverage and greater than or equal to zero, as specified in the relevant Index Supplement.

Non-Disrupted Commodity: Non-Disrupted Commodity will have the meaning set forth in Section 6.5 (Disruption of Constituents with more than one Underlying Commodity).

Non-Publication Day: means, with respect to any Calculation Day, a Calculation Day on which a Non-Publication Event has occurred or is continuing.

Non-Publication Event: The failure by the Relevant Exchange, Index Sponsor or other price source to announce publicly or publish the following (or the information necessary for determining the following) (a) the official settlement price for any relevant futures contract on the relevant commodity or commodities related to the Underlying Index of a Constituent or (b) the closing level of the Underlying Index of a
Constituent, in either case by noon (London time) on the immediately following Calculation Day, provided, however that the occurrence of such an event shall not constitute a “Non-Publication Event” in the case of clause (b) hereof if the Index Calculation Agent determines in its sole discretion by noon (London time) on such immediately following Calculation Day that the information necessary for determining the closing level of the relevant Underlying Index of a Constituent has been announced publicly or published by the Relevant Exchange, Index Sponsor or other price source in which case the Index Calculation Agent shall determine the U.S. Dollar Level of such Constituent (the U.S. Dollar Level so determined being a “Proxy Calculated Level”) in good faith and in a commercially reasonable manner.

Non-Volatility Targeted Index: The Non-Volatility Targeted Index is a hypothetical Index calculated similarly to the actual Index but without applying Volatility Targeting and Disruption Fallbacks, except that if such Calculation Day is a Non-Publication Day, the U.S. Dollar Level of the Constituent affected by such Non-Publication Day will be equal to the U.S. Dollar Level of such Constituent on the latest Calculation Day preceding Calculation Day t for which a U.S. Dollar Level of such Constituent is available. The hypothetical levels of the Non-Volatility Targeted Index (“Non-Volatility Targeted Index Levels”) in respect of each relevant day a Volatility Targeting Period are the basis of the Volatility Targeting calculation.

Proxy Calculated Level: will have the meaning set forth under the definition of “Non-Publication Event”.

Rebalancing Date: With respect to the Index and the determination of the Index Level (t), the Rebalancing Date will be Calculation Day d of each Rebalancing Period, where “d” is equal to the “Rebalancing Date Integer”, which is greater than or equal to 1 as indicated in the relevant Index Supplement.

The Rebalancing Date will be the specific Calculation Day in the Rebalancing Period corresponding to d (e.g., if Rebalancing Date Integer is equal to 1, each Rebalancing Date will be the 1st Calculation Day of the relevant Rebalancing Period and if Rebalancing Date Integer is equal to 2, each Rebalancing Date will be the 2nd Calculation Day in the relevant Rebalancing Period).

Additionally, for the purposes of Section 4 (Calculation and Determination of the Index Level) of these Standard Terms, the Rebalancing Dates will be enumerated with the zero-th Rebalancing Date being a hypothetical Rebalancing Date that would have immediately preceded the Index Inception Date (such zero-th Rebalancing Date being necessary in some situations for calculation of Volatility Matching or Volatility Targeting). The nth Rebalancing Date shall be referred to as Rebalancing Date_n (abbreviated as RDn).

Rebalancing Date Integer: With respect to the Rebalancing Date, the Rebalancing Date Integer is a whole number specified in the Index Supplement. See “Rebalancing Date” herein.
The Rebalancing Date Integer will be specified in the relevant Index Supplement.

Rebalancing Period: With respect to the initial Rebalancing Period, the period from but excluding the Index Inception Date to and including the following Rebalancing Determination Date, and with respect to any subsequent Rebalancing Period, the period from but excluding the Rebalancing Determination Date to and including the following Rebalancing Determination Date.

Rebalancing Determination Date: The date determined in accordance with the description set forth in the relevant Index Supplement. For the avoidance of doubt, the Rebalancing Determination Date may be with respect to a certain defined date that occurs periodically (e.g., the first of the month), upon the occurrence of an event (e.g., two moving averages crossing) or any other external or definable event, as set forth in the relevant Index Supplement.

Replication Adjustment Factor: The Replication Adjustment Factor will have the effect of reducing the Index Level by the Replication Adjustment Rate per annum, on an actual/360 basis.

Replication Adjustment Rate: A percentage specified in the relevant Index Supplement for the relevant Index. If no Replication Adjustment Rate is specified or if the Replication Adjustment Rate specified is zero (0), there is no Replication Adjustment Factor.

Relevant Exchange: means, with respect to any Underlying Commodity of a Constituent, the applicable commodities futures exchange on which the future contracts for that Underlying Commodity trade as determined by the index rules or methodology of the Underlying Index related to the applicable Constituent.

Short Constituent(s): means any Constituent specified in the relevant Index Supplement with a Short Market Position.

The delineation of whether a Constituent is a Short Constituent will be specified in the relevant Index Supplement.

Short Constituent Leverage: Short Constituent Leverage has the meaning set forth under Section 4 (Calculation and Determination of the Index Level) to these Standard Terms.

T-Bill Rate: means, with respect to each Calculation Day, the three month weekly Auction High Discount Rate for United States Treasury bills on the relevant Calculation Day, as reported on the Bloomberg® index USB3MTA; provided, however if such rate is not available at the applicable Bloomberg page, the rate will be determined in accordance with Section 6.10 (T-Bill Rate) below.

Target Index Volatility: A positive percentage specified in the relevant Index Supplement.

Volatility Matching: With respect to each Component i, Volatility Matching will be specified as either “Applicable” or “Not Applicable” in the relevant Index Supplement to indicate whether Volatility Matching applies to that Component.
If Volatility Matching applies to a Component, the Volatility Matching Lookback, the Maximum Short Constituent Leverage and the Minimum Short Constituent Leverage for the Short Constituent of that Component will be as specified in the relevant Index Supplement.

Volatility Matching is a mechanism to adjust the weight given to the Short Constituent within a Component, with the intention of accounting for a difference in volatility between the Short Constituent and the Long Constituent in that Component.

Volatility Matching cannot be used for Components that do not have both a Long Constituent and a Short Constituent.

As set forth in Section 4 (Calculation and Determination of the Index Level) of these Standard Terms, the Index Calculation Agent will calculate the VolRatio(RDn) (as defined in Section 4.3 herein), which is the ratio of the realized volatility of the Long Constituent to the realized volatility of the Short Constituent of Component i over a period preceding the nth Rebalancing Date. Subject to the Maximum Short Constituent Leverage i and Minimum Short Constituent Leverage i, the VolRatio(RDn) will determine the Short Constituent Leverage i(RDn) applied to the Short Constituent of Component i on the nth Rebalancing Date. Therefore, unless otherwise constrained by the Maximum Short Constituent Leverage i or Minimum Short Constituent Leverage i, if the Short Constituent exhibits greater volatility than the Long Constituent, the Short Constituent Leverage will be less than 100%, and if the Short Constituent exhibits lesser volatility than the Long Constituent, the Short Constituent Leverage will be greater than 100%.

Volatility Matching Lookback: With respect to Component i, the relevant Index Supplement will specify an integer greater than or equal to 2 that will indicate the number of Calculation Days’ returns that will be used for Volatility Matching for that Component, if applicable.

If Volatility Matching is “Not Applicable,” Volatility Matching Lookback, with respect to Component i will also be “Not Applicable.”

Volatility Matching Period(RDn) With respect to Component i and Rebalancing Date n, the chronologically ordered set of Volatility Matching Lookback i plus one consecutive Calculation Days ending with the Calculation Day immediately preceding Rebalancing Date n. The number of days is one greater than Volatility Matching Lookback i because, in order to measure k consecutive returns, one needs k + 1 levels.

The earliest day of the Volatility Matching Period(RDn) shall be regarded as the zero-th day of such period and the latest day of the Volatility Matching Period(RDn) shall be the Volatility Matching Lookback i-th day.

Volatility Targeting: With respect to an Index, the relevant Index Supplement will specify whether Volatility Targeting is “Applicable” or “Not Applicable” to the Index and the calculation of the Index Level.
If Volatility Targeting applies to an Index, the Target Index Volatility, Volatility Targeting Lookback 1, Volatility Targeting Lookback 2, Maximum Index Leverage and Minimum Index Leverage for the Index will be as specified in the relevant Index Supplement.

Volatility Targeting is a mechanism to adjust the overall leverage of the Index (called the Index Leverage(RDn)), with the intention of targeting a certain level of realized volatility of the Index.

As set forth in Section 4 (Calculation and Determination of the Index Level) to these Standard Terms, the Index Calculation Agent will calculate the IndexVol(RDn) were the Index Leverage(RDn) to have been 100% for all previous Rebalancing Dates and the Replication Adjustment Rate was set equal to zero. The volatility is measured over two periods (or, optionally, effectively just one period, by setting the two periods to be identical) with the maximum of the two measurements used in the foregoing calculation.

Given the Target Index Volatility and subject to the Maximum Index Leverage and Minimum Index Leverage, the IndexVol(RDn) will determine the Index Leverage(RDn) applied to the Index on the nth Rebalancing Date.

Volatility Targeting Lookback 1 and Volatility Targeting Lookback 2: The relevant Index Supplement will specify two integers that are each greater than or equal to 2, to indicate the number of Calculation Days' returns which will be used in the two measurements of volatility used for Volatility Targeting for the Index.

These two numbers can be the same, in which case there is effectively only one measurement of volatility for the Index.

If Volatility Targeting is “Not Applicable,” Volatility Targeting Lookback 1 and Volatility Targeting Lookback 2 will also be “Not Applicable.”

Volatility Targeting Period 1 (RDn) and Volatility Targeting Period 2(RDn):
With respect to Rebalancing Date\(_n\), the two sets of consecutive Calculation Days used in the calculation of IndexVol(RDn), both ending with the Calculation Day immediately preceding Rebalancing Date\(_n\).

Volatility Targeting Period 1(RDn) consists of a number of consecutive Calculation Days equal to 1 plus Volatility Targeting Lookback 1.

Volatility Targeting Period 2(RDn) consists of a number of consecutive Calculation Days equal to 1 plus Volatility Targeting Lookback 2.

The number of Calculation Days is 1 greater than the corresponding Volatility Targeting Lookback, because in order to measure \(k\) consecutive returns you need \(k + 1\) levels.
The earliest day of each Volatility Targeting Period shall be regarded as the zero-th day of the period, so that the latest day shall be the corresponding Volatility Targeting Lookback-th day.

U.S. Dollar Level: With respect to an Underlying Index and a Calculation Day, (a) the official closing level of the Underlying Index as published by the relevant Index Sponsor; provided, however that if the Index Calculation Agent determines that such official closing level reflects manifest error on the part of the relevant Index Sponsor, the Index Calculation Agent shall determine the closing level of the Underlying Index in good faith and in a commercially reasonable manner or (b) in such circumstances as set out in the definition of Non-Publication Event relating to the calculation of a Proxy Calculated Level, the U.S. Dollar Level will be the Proxy Calculated Level.

Underlying Commodity: means, with respect to each Constituent, the commodity (or commodities) referenced by the Underlying Index of such Constituent as determined in accordance with the Index Rules or methodology for that Underlying Index.

Underlying Index: The “Underlying Index” of each Constituent will be a commodity index. The name and Bloomberg Page of each Underlying Index will be set forth in the relevant Index Supplement.

The Underlying Index will be specified in the relevant Index Supplement.

4. Calculation and Determination of the Index

4.1 Overview

For an Index that is an excess return index, on each Calculation Day, if a Market Disruption Event has not occurred and is not continuing with respect to any Constituent within the Index on Rebalancing Date\(n-1\) and if a Market Disruption Event has not occurred (and is not continuing) with respect to any Constituent within the Index on such Calculation Day \(t\), the Index Calculation Agent will calculate and determine the Index Level\((t)\) with respect to such Calculation Day based on the formulae set forth in this section and the additional terms and details specified in the Index Supplement.

If a Market Disruption Event occurred with respect to any Constituent within the Index on Rebalancing Date\(n,1\) or if a Market Disruption Event has occurred (or is continuing) with respect to any Constituent within the Index on any Calculation Day \(t\), the Index Level\((t)\) will be determined in accordance with Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) in these Standard Terms.

For an Index that is a total return index, on each Calculation Day, if a Market Disruption Event has not occurred and is not continuing with respect to any Constituent within the Index on Rebalancing Date\(n,1\) and if a Market Disruption Event has not occurred (and is not continuing) with respect to any Constituent within the Index on such Calculation Day \(t\) (or any Calculation Days from but excluding Calculation Day \(t\) to but excluding Calculation Day RD \(n,1\)), the Index Calculation Agent will calculate and determine the Index Level \(t\) with respect to such Calculation Day based on the formulae set forth in this section and the additional terms and details specified in the Index Supplement.

If a Market Disruption Event occurred with respect to any Constituent within the Index on Rebalancing Date\(n,1\) or if a Market Disruption Event has occurred (or is continuing) with respect to any Constituent within the Index on such Calculation Day \(t\) (or any Calculation Days from but excluding
Calculation Day \( t \) to but excluding Calculation Day \( RD_{n-1} \), the Index Level \( t \) will be determined in accordance with the formulas set forth herein, subject to the terms set forth under Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) in these Standard Terms.

4.2 Index Rebalancing

Subject to the occurrence or the continuation of a Market Disruption Event, the Index will be rebalanced on each Rebalancing Date to adjust the synthetic exposure of the Long Constituent and the Short Constituent for each Component \( i \) in the Index to account for the performance of the Index and such Constituents since the immediately preceding Rebalancing Date, and the effects, if applicable, of the Volatility Matching and/or Volatility Targeting as well as any other formulas set forth in the Index Supplement. The effect of the rebalancing will be to reset the exposure to the Constituents of any Component \( i \), and, if applicable, change (a) the leverage of a Short Constituent with respect to Components where Volatility Matching is “Applicable” and (b) the leverage in the case of the overall Index exposure in the case of which Volatility Targeting is “Applicable,” each as described below.

4.3 Volatility Matching

Volatility Matching is a mechanism used to adjust the weighting of the Short Constituent within any Component in the relevant Index described in the Index Supplement. The relevant Index Supplement will specify whether Volatility Matching applies to all, none or a portion of the Components within the Index. If Volatility Matching is “Applicable”, the purpose of this function is an attempt to account for a difference in volatility between the Short Constituent and the Long Constituent for that specific Component within the relevant Index.

If Volatility Matching is “Applicable” for a specific Component in the Index, the Index Calculation Agent will determine the Short Constituent Leverage with respect to a Rebalancing Date \( RD_{n-1} \) for that specific Component. The Index Calculation Agent will calculate the volatility ratio \( \text{VolRatio}(RD_{n-1}) \) between the realized volatility of the Long Constituent and the realized volatility of the Short Constituent over a period preceding such Rebalancing Date (Volatility Matching Period \( RD_{n-1} \)). The Index Calculation Agent will then determine the Short Constituent Leverage \( SCL(RD_{n-1}) \) with respect to such Component \( i \) as set forth below, based on the VolRatio\( RD_{n-1} \), the Maximum Short Constituent Leverage and Minimum Short Constituent Leverage. The Maximum Short Constituent Leverage and the Minimum Short Constituent Leverage, if applicable, are specified in the Index Supplement. The Short Constituent Leverage on Rebalancing Date \( RD_{n-1} \) will be used to calculate the Period-To-Date Performance for the \( i \)th Component as set forth in Section 4.5 (Calculating the Period-To-Date Component Performance) of these Standard Terms.

The Short Constituent Leverage is determined by the Index Calculation Agent with respect to Calculation Day \( d \) in accordance with the following formula:

\[
SCL(RD_{n-1}) = \text{Min}(\text{MaxLeverage}, \text{Max}(\text{MinLeverage}, \text{VolRatio}(RD_{n-1})))
\]

where

\( SCL(RD_{n-1}) \) means, with respect to Calculation Day \( d \), the Short Constituent Leverage for the immediately preceding Rebalancing Date \( RD_{n-1}. \)

\( \text{MaxLeverage} \) means the Maximum Short Constituent Leverage.

\( \text{MinLeverage} \) means the Minimum Short Constituent Leverage.
VolRatio\(RD_{n-1}\) is 1 if Volatility Matching is “Not Applicable” with respect to Component i, as indicated in the relevant Index Supplement and otherwise is defined by the following formula:

\[
VolRatio(RD_{n-1}) = \sqrt{\frac{252}{m-1} \times \sum_{j=1}^{m} \left( Rtn_{Long}(j) - \frac{1}{m} \sum_{k=1}^{m} Rtn_{Long}(k) \right)^2} \cdot \sqrt{\frac{252}{m-1} \times \sum_{j=1}^{m} \left( Rtn_{Short}(j) - \frac{1}{m} \sum_{k=1}^{m} Rtn_{Short}(k) \right)^2}
\]

where

- \(m\) means the Volatility Matching Lookback
- \(Rtn_{Long}(j)\) means the return of the Long Constituent on the \(j\)-th day of the Volatility Matching Period\(RD_{n-1}\), defined as follows:
  \[
  Rtn_{Long}(j) = \frac{LookbackLevel_{Long}(j)}{LookbackLevel_{Long}(j-1)} - 1
  \]
- \(Rtn_{Long}(k)\) means the return of the Long Constituent on the \(k\)-th day of the Volatility Matching Period\(RD_{n-1}\), defined as follows:
  \[
  Rtn_{Long}(k) = \frac{LookbackLevel_{Long}(k)}{LookbackLevel_{Long}(k-1)} - 1
  \]
- \(Rtn_{Short}(j)\) means the return of the Short Constituent on the \(j\)-th day of the Volatility Matching Period\(RD_{n-1}\), defined as follows:
  \[
  Rtn_{Short}(j) = \frac{LookbackLevel_{Short}(j)}{LookbackLevel_{Short}(j-1)} - 1
  \]
- \(Rtn_{Short}(k)\) means the return of the Short Constituent on the \(k\)-th day of the Volatility Matching Period\(RD_{n-1}\), defined as follows:
  \[
  Rtn_{Short}(k) = \frac{LookbackLevel_{Short}(k)}{LookbackLevel_{Short}(k-1)} - 1
  \]

where

- \(LookbackLevel_{Long}(j)\) means the U.S. Dollar Level of the Long Constituent on the \(j\)-th day of the Volatility Matching Period\(RD_{n-1}\).
4.4 Volatility Targeting

Volatility Targeting is a mechanism that adjusts the overall leverage of the Index (Index Leverage(RD<sub>n-1</sub>)) in order to target a certain level of realized volatility of the Index. Volatility Targeting will be specified in the relevant Index Supplement, and the relevant Index Supplement will specify whether Volatility Targeting is “Applicable” or “Not Applicable” to the Index described therein.

If the relevant Index Supplement specifies that Volatility Targeting is “Applicable” for an Index, the Index Calculation Agent will determine the Index Leverage applicable for the immediately preceding Rebalancing Date (RD<sub>n-1</sub>). The Index Calculation Agent will calculate index volatility (IndexVol(RD<sub>n-1</sub>)) based on the hypothetical realized volatility of a Non-Volatility Targeted Index over the Rebalancing Period (Volatility Targeting Period 1(RD<sub>n</sub>) and Volatility Targeting Period 2(RD<sub>n</sub>) (each a “Volatility Targeting Period”). The Non-Volatility Targeted Index is a hypothetical index identical to the Index, except that the IndexLeverage(RD<sub>n</sub>)) is considered to have been 100% for all previous Rebalancing Dates and the Replication Adjustment Rate will be set equal to zero.

The Index Leverage(RD<sub>n-1</sub>) applied to the Index on Rebalancing Date (RD<sub>n-1</sub>) will be determined by the Index Calculation Agent and will be equal to a percentage equivalent of the fraction, the numerator of which is the Target Index Volatility and the denominator of which is IndexVol(RD<sub>n-1</sub>); however, such percentage cannot be greater than the Maximum Index Leverage or less than the Minimum Index Leverage.

The Index Leverage is determined by the Index Calculation Agent with respect to the Rebalancing Date (RD<sub>n-1</sub>) immediately preceding each Calculation Day d in accordance with the following formula:
IndexLeverage(\(RD_{n-1}\)) means, with respect to Volatility Targeting, if Volatility Targeting is specified as “Not Applicable”, 1; otherwise:

\[
\text{IndexLeverage}(RD_{n-1}) = \max \left( \min \left( \frac{\text{TargetVol}}{\text{IndexVol}(RD_{n-1})} \times \text{MaxLeverage} \right), \text{MinLeverage} \right)
\]

where

- \(\text{MinLeverage}\) means the Minimum Index Leverage
- \(\text{MaxLeverage}\) means the Maximum Index Leverage
- \(\text{TargetVol}\) means the Target Index Volatility

\[
\text{IndexVol}(RD_{n-1}) = \max \left( \text{VolMeasure}_1(RD_{n-1}), \text{VolMeasure}_2(RD_{n-1}) \right)
\]

where

\[
\text{VolMeasure}_1(RD_{n-1}) = \sqrt{\frac{252}{m_1 - 1} \times \sum_{j=1}^{m_1} \left( \text{Rtn}(j,1,n-1) - \frac{1}{m_1} \sum_{k=1}^{m_1} \text{Rtn}(k,1,n-1) \right)^2}
\]

\[
\text{VolMeasure}_2(RD_{n-1}) = \sqrt{\frac{252}{m_2 - 1} \times \sum_{j=1}^{m_2} \left( \text{Rtn}(j,2,n-1) - \frac{1}{m_2} \sum_{k=1}^{m_2} \text{Rtn}(k,2,n-1) \right)^2}
\]

- \(m_1\) means Volatility Targeting Lookback 1
- \(m_2\) means Volatility Targeting Lookback 2

\(\text{Rtn}(j,1,n-1)\) means the return of the Non-Volatility Targeted Index on the \(j\)-th day of Volatility Targeting Period 1(\(RD_{n-1}\)), defined as follows:

\[
\text{Rtn}(j,1,n-1) = \frac{\text{NVTIndex}(j,1,n-1)}{\text{NVTIndex}(j-1,1,n-1)} - 1
\]

\(\text{Rtn}(j,2,n-1)\) means the return of the Non-Volatility Targeted Index on the \(j\)-th day of Volatility Targeting Period 2(\(RD_{n-1}\)), defined as follows:

\[
\text{Rtn}(j,2,n-1) = \frac{\text{NVTIndex}(j,2,n-1)}{\text{NVTIndex}(j-1,2,n-1)} - 1
\]

\(\text{Rtn}(k,1,n-1)\) means the return of the Non-Volatility Targeted Index on the \(k\)-th day of Volatility Targeting Period 1(\(RD_{n-1}\)), defined as follows:
\[
Rtn(k,1,n-1) = \frac{NVTIndex(k,1,n-1)}{NVTIndex(k-1,1,n-1)} - 1
\]

\[
Rtn(k,2,n-1) = \frac{NVTIndex(k,2,n-1)}{NVTIndex(k-1,2,n-1)} - 1
\]

\[
NVTIndex(j,1,n-1) \text{ means the Non-Volatility Targeted Index Level on the } j\text{-th day of Volatility Targeting Period 1(RD}_{n-1})
\]

\[
NVTIndex(j,2,n-1) \text{ means the Non-Volatility Targeted Index Level on the } j\text{-th day of Volatility Targeting Period 2(RD}_{n-1})
\]

\[
NVTIndex(j-1,1,n-1) \text{ means the Non-Volatility Targeted Index Level on the } j-1\text{-th day of Volatility Targeting Period 1(RD}_{n-1})
\]

\[
NVTIndex(j-1,2,n-1) \text{ means the Non-Volatility Targeted Index Level on the } j-1\text{-th day of Volatility Targeting Period 2(RD}_{n-1})
\]

\[
NVTIndex(k,1,n-1) \text{ means the Non-Volatility Targeted Index Level on the } k\text{-th day of Volatility Targeting Period 1(RD}_{n-1})
\]

\[
NVTIndex(k,2,n-1) \text{ means the Non-Volatility Targeted Index Level on the } k\text{-th day of Volatility Targeting Period 2(RD}_{n-1})
\]

\[
NVTIndex(k-1,1,n-1) \text{ means the Non-Volatility Targeted Index Level on the } k-1\text{-th day of Volatility Targeting Period 1(RD}_{n-1})
\]

\[
NVTIndex(k-1,2,n-1) \text{ means the Non-Volatility Targeted Index Level on the } k-1\text{-th day of Volatility Targeting Period 2(RD}_{n-1})
\]

4.5 Calculating the Period-To-Date Component Performance for each Component

The Period-To-Date Performance for the \(i\)th Component on Calculation Day \(t\) (henceforth PTD\(C_P (t)\)) represents the net return of such Component \(i\) from the Rebalancing Date immediately preceding Calculation Day \(t\) (henceforth, such Rebalancing Date will be referred to as Calculation Day (RD\(_{n-1}\))).

The Period-To-Date Performance is determined by the Index Calculation Agent with respect to Calculation Day \(t\) in accordance with the following formula:

\[
PTDCP_i (t) = \left( \frac{Level_{Long}(t)}{Level_{Long}(RD_{n-1})} - 1 \right) - SCL_i(RD_{n-1}) \left( \frac{Level_{Short}(t)}{Level_{Short}(RD_{n-1})} - 1 \right)
\]

\(RD_{n-1}\) is the Rebalancing Date immediately preceding the relevant Calculation Day.
\( \text{Level}_{\text{Long}}(t) \) is 100 if the \( i^{\text{th}} \) Component has no Long Constituent, otherwise the U.S. Dollar Level of the Long Constituent of the \( i^{\text{th}} \) Component, with respect to Calculation Day \( t \).

\( \text{Level}_{\text{Short}}(t) \) is 100 if the \( i^{\text{th}} \) Component has no Short Constituent, otherwise the U.S. Dollar Level of the Short Constituent of the \( i^{\text{th}} \) Component, with respect to Calculation Day \( t \).

\( \text{Level}_{\text{Long}}(RD_{n-1}) \) is 100 if the \( i^{\text{th}} \) Component has no Long Constituent, otherwise the U.S. Dollar Level of the Long Constituent of the \( i^{\text{th}} \) Component, on Rebalancing Date \( n-1 \).

\( \text{Level}_{\text{Short}}(RD_{n-1}) \) is 100 if the \( i^{\text{th}} \) Component has no Short Constituent, otherwise the U.S. Dollar Level of the Short Constituent of the \( i^{\text{th}} \) Component, on Rebalancing Date \( n-1 \).

\( SCL_i(RD_{n-1}) \) is 0 if the \( i^{\text{th}} \) Component has no Short Constituent, otherwise the Short Constituent Leverage for Component \( i \) for Rebalancing Date \( n-1 \), as defined pursuant to Section 4.3 of these Standard Terms.

### 4.6 Calculations for an Excess Return Index on each Calculation Day \( t \)

Unless otherwise specified in the Index Supplement, the Initial Index Level will be equal to 100.0000 on the Index Inception Date, or:

\[
\text{Index}(t_0) = 100.0000
\]

the Index Inception Date will be set forth in the relevant Index Supplement.

With respect to each Calculation Day \( t \) following the Index Inception Date, if the Index is an excess return index, the Index Level will be determined by the Index Calculation Agent as follows:

\[
\text{Index}_{\text{ER}}(t) = \left[ \text{Index}_{\text{ER}}(RD_{n-1}) + \text{Index}_{\text{ER}}(RD_{n-1}) \times \text{IndexLeverage}(RD_{n-1}) \times \sum_{i=1}^{NS} W_i \times PTDCP_i(t) \right] \times (1 - RAF_t)
\]

\( \text{Index}_{\text{ER}}(RD_{n-1}) \) means, with respect to each Calculation Day \( t \), the Index Level on the Rebalancing Date immediately preceding Calculation Day \( t \), rounded to 4 decimals.

\( \text{IndexLeverage}(RD_{n-1}) \) means, with respect to each Calculation Day \( t \), the Index Leverage on the Rebalancing Date immediately preceding Calculation Day \( t \) determined in Section 4.4 (Volatility Targeting) above.

\( NS \) means the total number of Components in the Index.

\( W_i \) means Component Weight,

\( PTDCP_i(t) \) means the Period-To-Date Component Performance for the \( i^{\text{th}} \) Component on Calculation Day \( t \) as determined in accordance with Section 4.5 (Calculating the Period-To-Date Component Performance for each Component) above.
means, with respect to Calculation Day t, the Replication Adjustment Factor, calculated by the Index Calculation Agent as follows:

$$RAF_t = 1 - \left(1 - RAR\right)^{\frac{\text{CalendarDays}}{360}}$$

where:

RAR is the Replication Adjustment Rate, if applicable.

CalendarDays is the number of calendar days from, and including, the Rebalancing Date immediately preceding Calculation Day t to, but excluding, Calculation Day t.

4.7 Calculations for a Total Return Index on each Calculation Day t

With respect to a particular Index, if the Index Type is a total return index, the Index Calculation Agent will calculate the Index Level to reflect the returns associated with the synthetic exposure in the Index and the returns associated with synthetic exposure to three month U.S. T-bills.

The Total Return Index is calculated as follows:

$$Index_{TR}(t) = Index_{TR}(t-1) \times \left[1 + \text{IndexLeverage}(RD_{n-1}) \times \sum_{i=1}^{\text{NS}} W_i \times PTDCP_i(t) \right] \times \left[1 + \text{IndexLeverage}(RD_{n-1}) \times \sum_{i=1}^{\text{NS}} W_i \times \delta(t-1) \times PTDCP_i(t-1) \right] + TBR_i \times \left(1 + TBR_i \right)^{\delta(t)} \times (1 - RAF_t)$$

where:

Index_{TR}(t) means, with respect to a total return index, the Index Level on Calculation Day t;

Index_{TR}(t-1) means, with respect to a total return index, the Index Level on Calculation Day t-1.

IndexLeverage(RD_{n-1}) means, with respect to each Calculation Day t, the Index Leverage on the Rebalancing Date immediately preceding Calculation Day t determined in Section 4.4 (Volatility Targeting) above.

NS means the total number of Components in the Index.

W_i means Component Weight,

PTDCP_i(t) means the Period-To-Date Component Performance for the i-th Component on Calculation Day t as determined in accordance with Section 4.6 (Calculating the Period-To-Date Component Performance for each Component) above.

PTDCP_i(t-1) means, with respect to any Calculation Day t, the Period-To-Date Component Performance for each Component i on Calculation Day t-1.

\(\delta(t-1)\) is equal to 0 if Calculation Day t-1 is a Rebalancing Date, otherwise 1
$TBR_t$ means, with respect to Calculation Day $t$, the return associated with the T-Bill Rate on Calculation Day $t$, calculated using the following formula:

$$
(1 - \frac{91}{360} \times TBILL_{t-1})^{\frac{-1}{91}} - 1
$$

$TBILL_{t-1}$ means the T-Bill Rate on Calculation Day $t-1$ as defined in section 3 (Definitions) herein.

$A(t)$ means the number of calendar days that are not Calculation Days from (and excluding) Calculation Day $t-1$ to (and including) Calculation Day $t$.

$RAF_t$ means, with respect to Calculation Day $t$, the Replication Adjustment Factor, calculated by the Index Calculation Agent as follows:

$$RAF_t = 1 - \left(1 - \frac{RAR}{360}\right)^{\frac{CalendarDays}{360}}$$

where:

$RAR$ is the Replication Adjustment Rate, if applicable.

$CalendarDays$ is the number of calendar days from, and including, the Rebalancing Date immediately preceding Calculation Day $t$ to, but excluding, Calculation Day $t$.

5. **Publication**

With respect to each Calculation Day $t$, unless otherwise specified in the relevant Index Supplement, the Index Calculation Agent will endeavor to publish the Index Level(t) for each Calculation Day $t$ before, at or around 12:00 p.m. noon London time on the following Calculation Day.

Although the Index Calculation Agent will endeavor to publish the Index Level even with respect to a Calculation Day that is a Disrupted Day, the Index Calculation Agent is not obligated to publish the Index Level with respect to any Calculation Day that is a Disrupted Day. The Index Level published with respect to any Calculation Day that is a Disrupted Day will be considered solely indicative and is not intended to provide information regarding “tradable levels”.

For the avoidance of doubt, the Index Calculation Agent will endeavor to publish an Index Level with respect to each Calculation Day, whether or not such Calculation Day is a Disrupted Day and generally will not revise such published Index Level once published. However, where the Index Level on subsequent Calculation Days depends on the Index Level on previous Calculation Days (e.g., the Index Level on the previous Rebalancing Date), the Index Calculation Agent will apply an adjusted Index Level that is different from the published level. See Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) to these Standard Terms.

The Index Level will be published on a Bloomberg page and the Bloomberg website at the pages indicated by the Index Ticker.

The Index Level shall be published to 4 decimal places.
Notwithstanding anything to the contrary, the Index Calculation Agent may calculate, but not publish the Index Level if the Index is used solely as a part of another Index or strategy, the index level or price of which is separately published by the Index Calculation Agent or one of its affiliates. For example, these Standard Terms and an accompanying Index Supplement will constitute the Index Rules for an Index, which may be used as a Component for another Index that incorporates these Standard Terms and has a separate Index Supplement.

For the avoidance of doubt, to the extent the Index is a stand-alone index, the Index Calculation Agent will publish such Index Level in accordance with the provisions herein.

6. **Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event**

   6.1. **Introduction**

For any Index that is an excess return index, on each Calculation Day, if Calculation Day t is a Disrupted Day or if Rebalancing Day n-1 immediately preceding Calculation Day t was a Disrupted Day, the Index Calculation Agent will calculate the Index Level in accordance with this Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event).

For any Index that is a total return index, on each Calculation Day, if Calculation Day t (or any Calculation Days from and including Rebalancing Date n-1 to but excluding such Calculation Day t) is a Disrupted Day or if Rebalancing Day n-1 immediately preceding Calculation Day t was a Disrupted Day, the Index Calculation Agent will calculate the Adjusted Index Level in accordance with this Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event).

This Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) of these Standard Terms sets forth alternative calculations for determining the Adjusted Index Level in the particular instances where a Market Disruption Event affects the Index Calculation Agent’s determination of an Index Level.

The following section sets forth provisions relating to the calculation and publication of Adjusted Index Levels. In this description, the Index Calculation Agent (“we” or “us”) endeavors to describe the manner in which we will calculate and/or publish the Adjusted Index Level on different dates. In order to best convey this information, the following description errs on the quantitative side, and before reading this description, we would like to highlight certain drafting points for you, the reader.

6.2 **Use of Prepositions**

References herein to levels calculated “with respect to a Calculation Day t” refer to levels that are calculated for such Calculation Day; however, such levels may not be calculated on that Calculation Day t. In order to denote that levels will be calculated on a day that may or may not be Calculation Day t, we refer to such levels as being calculated “as of” a Calculation Day. When we refer to the actual date on which we calculate levels, which is the “as of” date, we may refer to a Calculation Day s, where “s” is a notation that refers to any Calculation Day on or after Calculation Day t. In other words, if we refer to an “Adjusted Index Level with respect to Calculation Day t as of Calculation Day s” and Calculation Day t is Monday and Calculation Day s is Wednesday, then we are referring to the Adjusted Index Level for Monday that is calculated on Wednesday pursuant to this section 6. You should note that Calculation Day s is in most cases Calculation Day t; in other words, the Index Level (calculated pursuant to section 4) or Adjusted Index Level (calculated pursuant to this section 6) for Monday will be calculated on Monday if such day is not a Disrupted Day. The Adjusted Index Level with respect to Calculation Day t is only calculated on a Calculation Day s that is after Calculation Day t if Calculation Day t is a Disrupted Day.

6.3 **Time Frame of Various Index Calculation Agent Determinations**
The Index Calculation Agent will make determinations in three distinct time frames pursuant to this section 6.

First, the Index Calculation Agent will determine Adjusted U.S. Dollar Levels of Constituents, Adjusted Period-To-Date Component Performances and the Adjusted Index Level on the relevant Calculation Day t as of Calculation Day t. We refer to the Adjusted Index Level as of Calculation Day t as the “Initial Adjusted Level”. The Index Calculation Agent will publish such Initial Adjusted Level of the Index Level with respect to any Calculation Day t as of such Calculation Day t. An Initial Adjusted Level may or may not be a tradable price. An Initial Adjusted Level, even one with respect to a Calculation Day that is a Disrupted Day, may have an impact on tradable levels for future Calculation Days.

Second, the Index Calculation Agent will determine levels with respect to Calculation Day t as of each Calculation Day s, where Calculation Day t is a Disrupted Day and “s” refers to each Calculation Day from and including Calculation Day t, provided, however, that Calculation Day s is a day that is no later than the earlier of (i) the first Calculation Day following Calculation Day t that is not a Disrupted Day or (ii) the sixth Calculation Day from and including Calculation Day t. We refer to levels determined in this manner as “Interim Adjusted Levels” because the Index Calculation Agent will determine such levels on Calculation Day s. Please note that the Initial Adjusted Level of the Index Level with respect to any Calculation Day t as of such Calculation Day t is the same as the Interim Adjusted Level with respect to Calculation Day t as of Calculation Day s, where Calculation Day s is a Disrupted Day and “s” refers to Calculation Day t. Interim Adjusted Levels may have an impact on published prices for future Calculation Days. For example, if Calculation Day RD n-1 was a Disrupted Day (or, in the case of a total return index, for any Calculation Day from and including Calculation Day RDn-1 to but excluding Calculation Day t was a Disrupted Day), the Interim Adjusted Level of the Index will be used in the calculation of the Initial Adjusted Level on a subsequent Calculation Day t that is not a Disrupted Day (for an Index that is an excess return index, see the formula set forth in Step 3 herein under Section 6.6 (Alternative Calculations upon a Market Disruption Event for Excess Return Indices) where the Interim Adjusted Level of the Index with respect to Calculation Day RD n-1, as of Calculation Day RD n-1, is referred to as

$$\text{Index}_{\text{Adj,RD}_{n-1}}(RD_{n-1})$$

and for an Index that is a total return index see Section 6.7 (Alternative Calculations upon a Market Disruption Events for Total Return Indices).

Third, the Index Calculation Agent will determine levels with respect to Calculation Day t as of Calculation Day s, where Calculation Day s is the earlier of either (i) the first Calculation Day following Calculation Day t that is not a Disrupted Day and (ii) the sixth consecutive Calculation Day from and including Calculation Day t that is a Disrupted Day. We refer to this level as the “Final Adjusted Level”. In most cases, we would expect that Calculation Day t will not be a Disrupted Day and therefore the Initial Adjusted Level with respect to Calculation Day t and as of such Calculation Day t (which is the case when s equals t) will be the Final Adjusted Level. Under these circumstances, the Initial Adjusted Level will be equal to the Final Adjusted Level, and there will be no other Interim Adjusted Level. Please note that if the immediately prior Rebalancing Day n-1 was a Disrupted Day but Calculation Day t is not a Disrupted Day, the Initial Adjusted Level with respect to Calculation Day t will be equal to the Final Adjusted Level with respect to Calculation Day t. In other instances, where Calculation Day t is a Disrupted Day, the Index Calculation Agent will calculate the Interim Adjusted Level with respect to Calculation Day t for up to six consecutive Calculation Days. Where Calculation Day t is a Disrupted Day, the Final Adjusted Level will equal the Interim Adjusted Level with respect to Calculation Day t as of the last Calculation Day s used for determining such Interim Adjusted Level. Where Calculation Day t is a Disrupted Day, on the first Calculation Day s that is not a Disrupted Day following Calculation Day t, the Index Calculation Agent will determine the Final Adjusted Level with respect to Calculation Day t as of such Calculation Day s using the Final Adjusted U.S. Dollar Levels of each Constituent determined with respect to Calculation Day t as of the applicable Calculation Day s for each such Constituent; provided, however, that if each of the six consecutive Calculation Days from and including Calculation Day t is a Disrupted Day, the Index Calculation Agent will determine the Final Adjusted Level of the Index with respect to Calculation Day t as of such Calculation Day s using the Final Adjusted U.S. Dollar Level of that Constituent determined with respect to Calculation Day t as of the applicable Calculation Day s in good
faith and in a commercially reasonable manner on the sixth consecutive Disrupted Day from and including Calculation Day $t$. The Final Adjusted Level of the Index will be a tradable level because such level will generally be determined as of a Calculation Day that is not a Disrupted Day. Again, in most cases, the Final Adjusted Level will be the same as the Initial Adjusted Level with respect to any Calculation Day $t$ because such Calculation Day $t$ is not a Disrupted Day. For clarification, we used “Adjusted” in the term “Final Adjusted Level” because if Calculation Day RD $n-1$ is a Disrupted Day, such Final Adjusted Level may include an Interim Adjusted Level (see the immediately preceding paragraph and Step 3 of Section 6.6 (Alternative Calculations upon a Market Disruption Event for Excess Return Indices) to these Standard Terms for more information for an Index that is an excess return index and Section 6.7 (Alternative Calculations upon a Market Disruption Event for Total Return Indices) to these Standard Terms for more information for an Index that is a total return index).

6.4 Adjusted U.S. Dollar Levels determined by the Index Calculation Agent

If Calculation Day $t$ is a Disrupted Day, the Index Calculation Agent may adjust (a) the U.S. Dollar Level of a Constituent $c$ of any Component $i$ with respect to Calculation Day $t$ as of Calculation Day $s$ (an “Adjusted U.S. Dollar Level”), (b) the Period-To-Date Component Performance of any Component $i$ with respect to Calculation Day $t$ as of Calculation Day $s$ (an “Adjusted Period-To-Date Component Performance”) and (c) the Index Level with respect to Calculation Day $t$ as of Calculation Day $s$ (an “Adjusted Index Level”). Determinations of these three items follow the formulas used to calculate the Index Level set forth in Section 4 (Calculation and Determination of the Index Level) of these Standard Terms; however, this Section supplements and modifies the formulas set forth in Section 4 (Calculation and Determination of the Index Level) of these Standard Terms (a) for any Calculation Day $t$ that is a Disrupted Day (and, with respect to a total return index, for any Calculation Day from and including any Calculation Day RD $n-1$ to and including Calculation Day $t$ that is a Disrupted Day) and (b) for any Calculation Day $t$ if the immediately previous Calculation Day RD $n-1$ was a Disrupted Day. With respect to any Calculation Day $t$ that is a Disrupted Day (and, with respect to a total return index, for any Calculation Day from and including any Calculation Day RD $n-1$ to and including Calculation Day $t$ that is a Disrupted Day), the Index Calculation Agent will calculate Interim Adjusted Levels as of any Calculation Day $s$ where “$s$” refers to any Calculation Day from and including Calculation Day $t$, provided, however, that Calculation Day $s$ is a day that is not later than the earlier of (i) the first Calculation Day following Calculation Day $t$ that is not a Disrupted Day and (ii) the sixth Calculation Day from and including Calculation Day $t$. As of each such Calculation Day $s$, the Index Calculation Agent will calculate the Adjusted U.S. Dollar Level, the Adjusted Period-To-Date Component Performance and the Adjusted Index Level. For the avoidance of doubt, such Calculation Day $s$ refers to the Calculation Day $s$ for each Component. For example, if our Index consisted of two Components (Component A and Component B) with two Constituents each (Constituent A1 and Constituent A2; and Constituent B1 and Constituent B2), (a) if Calculation Day $t$ is not a Disrupted Day with respect to Component A, then Calculation Day $t$ will be the same day as Calculation Day $s$ for Component A and the Final Adjusted U.S. Dollar Level of Constituent A1 and Constituent A2 will be equal to the U.S. Dollar Level of Constituent A1 and Constituent A2 as of Calculation Day $t$, respectively, and (b) if Calculation Day $t$ is not a Disrupted Day with respect to Component B, the Adjusted U.S. Dollar Level of Constituent B1 and B2 will be determined as of Calculation Day $t$, the Index Calculation Agent will calculate Adjusted U.S. Dollar Levels as of consecutive Calculation Days from and including Calculation Day $t$, each of which will be a Calculation Day $s$, and then, on the first Calculation Day $s$ that is the earlier of (a) the first Calculation Day following Calculation Day $t$ that is not a Disrupted Day for Component B or (b) the sixth Calculation Day from and including Calculation Day $t$, the Index Calculation Agent will calculate (i) the Final Adjusted U.S. Dollar Levels of each Constituent within Component B with respect to Calculation Day $t$ as of such Calculation Day $s$, (ii) the Adjusted Period-To-Date Component Performance of Component B with respect to Calculation Day $t$ as of such Calculation Day $s$ and (iii) the Adjusted Index Level with respect to Calculation Day $t$ as of such Calculation Day $s$, which in each case will equal the Adjusted U.S. Dollar Level with respect to Calculation Day $t$ as of the last Calculation Day $s$ used for determining such Adjusted U.S. Dollar Level. The Calculation Day $s$ on which the Final Adjusted U.S. Dollar Levels associated with Component A are calculated is not the same Calculation Day $s$ on which the Final Adjusted U.S. Dollar Levels associated with Component B are calculated; however, all of such calculations are determined with respect to Calculation Day $t$. 

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6.5 Disruption of Constituents with more than one Underlying Commodity

With respect to any Constituent c in which the Underlying Index consists of more than one commodity, if Calculation Day t is a Disrupted Day for any commodity represented in such Constituent c, the Index Calculation Agent may adjust (a) the U.S. Dollar Level of a Constituent c of any Component i with respect to Calculation Day t as of Calculation Day s (an “Adjusted U.S. Dollar Level”), (b) the Period-To-Date Component Performance of any Component i with respect to Calculation Day t as of Calculation Day s and (an “Adjusted Period-To-Date Component Performance”) (c) the Index Level with respect to Calculation Day t as of Calculation Day s (an “Adjusted Index Level”). With respect to any Calculation Day t that is a Disrupted Day, the Index Calculation Agent will calculate Adjusted U.S. Dollar Levels for such Constituent c as of any Calculation Day s where “s” refers to any Calculation Day from and including Calculation Day t, provided, however, that Calculation Day s is a day that falls on or before the earlier of (i) the first Calculation Day following Calculation Day t that is not a Disrupted Day and (ii) the sixth Calculation Day from and including Calculation Day t. As of each such Calculation Day s, the Index Calculation Agent will calculate the Adjusted U.S. Dollar Level of such Constituent c (as set forth below), the Adjusted Period-To-Date Component Performance for each Component i (applying such Adjusted U.S. Dollar Level for such Constituent c) and the Adjusted Index Level.

With respect to any Constituent c in which the Underlying Index consists of more than one commodity, if Calculation Day t is a Disrupted Day for any commodity represented in such Constituent c, the Index Calculation Agent will calculate the Adjusted U.S. Dollar Level of such Constituent c with respect to Calculation Day t as of Calculation Day s in a good faith and commercially reasonable manner and (a) if such Calculation Day t is not a Disrupted Day for the applicable commodity in such Constituent c (each, a “Non-Disrupted Commodity”), the Index Calculation Agent will use the official settlement price of the applicable futures contact(s) of each applicable Non-Disrupted Commodity on Calculation Day t as determined by the Index Calculation Agent in a good faith and commercially reasonable manner and (b) if such Calculation Day t is a Disrupted Day for the applicable commodity in such Constituent c (each, a “Disrupted Commodity”),

- if each Calculation Day from and including Calculation Day t to and including Calculation Day s is a Disrupted Day for such Disrupted Commodity, the Index Calculation Agent will use the official settlement price on Calculation Day s; provided, however, that if the official settlement price for such Disrupted Commodity on Calculation Day s is unavailable, the Index Calculation Agent will determine such price in a good faith and commercially reasonable manner and

- otherwise, the Index Calculation Agent will use the official settlement price on the first Calculation Day from and including Calculation Day t to and including Calculation Day s that is not a Disrupted Day for such Disrupted Commodity; provided, however that if each Calculation Day s from and including Calculation Day t to and including Calculation Day t+5 is a Disrupted Day for such Disrupted Commodity, the Index Calculation Agent will determine such price in a good faith and commercially reasonable manner.

6.6 Alternative Calculations upon a Market Disruption Event for Excess Return Indices

Alternative calculations upon a Market Disruption Event pursuant to this section 6 will be applied to the calculation of the Index Level (pursuant to Section 4) with respect to Calculation Day t in three different scenarios:

(a) such Calculation Day t is a Disrupted Day and Calculation Day RD n-1 was not a Disrupted Day for at least one Constituent within the Index;
(b) such Calculation Day t is a Disrupted Day and Calculation Day RD n-1 was a Disrupted Day for at least one Constituent within the Index; and
(c) such Calculation Day t is not a Disrupted Day and Calculation Day RD n-1 was a Disrupted Day for at least one Constituent within the Index.
The Index Calculation Agent will apply the following alternative calculations of the Adjusted Index Level with respect to Calculation Day \( t \) if any of the scenarios set forth above have occurred. Additionally, if any preceding Rebalancing Date is a Disrupted Day, the Adjusted Index Level will be affected because the Adjusted Index Level with respect to any Calculation Day RD \( n-1 \) will be determined with respect to Rebalancing Date \( n-2 \). In other words, the Adjusted Index Level with respect to any Calculation Day \( t \) is path dependent and will be impacted by the Adjusted Index Level with respect to every preceding Rebalancing Date.

**Application of Alternative Calculations and Calculation of the Adjusted Index Level**

If any of the three different scenarios above occur, the Index Calculation Agent will apply the following alternative calculations to the Adjusted Index Level with respect to Calculation Day \( t \).

For the avoidance of doubt, if Calculation Day \( t \) is not a Disrupted Day and Calculation Day RD \( n-1 \) is not a Disrupted Day, then the Index Level will be determined in accordance with the formulae set forth in Section 4 (Calculation and Determination of the Index Level) to these Standard Terms, and the formulae set forth in this Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) to these Standard Terms shall not apply.

**Step 1: Calculate the Adjusted U.S. Dollar Level of Constituent \( c \) with respect to Calculation Day \( t \) as of Calculation Day \( s \)**

If Calculation Day \( t \) is not a Disrupted Day with respect to a Component \( i \), and a Constituent \( c \) is contained in Component \( i \), then no alternative calculations are required for such Constituent and the Index Calculation Agent will apply the U.S. Dollar Level of such Constituent \( c \) with respect to Calculation Day \( t \) as of Calculation Day \( s \). With respect to such Constituent \( c \), the Adjusted U.S. Dollar Level will be equal to the U.S. Dollar Level for such Constituent \( c \).

If Calculation Day \( t \) is a Disrupted Day with respect to a Component \( i \), and a Constituent \( c \) is contained in Component \( i \), the Index Calculation Agent will determine the Adjusted U.S. Dollar Level of Constituent \( c \), which we refer to as \( \text{Level}_{Adj,s}^c(t) \), with respect to Calculation Day \( t \) as of Calculation Day \( s \) (where Calculation Day \( s \) is not earlier than Calculation Day \( t \)) as follows:

- if each Calculation Day from and including Calculation Day \( t \) to and including Calculation Day \( s \) is a Disrupted Day for Component \( i \) that contains Constituent \( c \), \( \text{Level}_{Adj,s}^c(t) \) is equal to the U.S. Dollar Level of Constituent \( c \) on Calculation Day \( s \); provided, however that if Calculation Day \( s \) is a Non-Publication Day for Constituent \( c \), then such level will be equal to the U.S. Dollar Level of Constituent \( c \) on the latest Calculation Day preceding Calculation Day \( s \) that is not a Non-Publication Day for Constituent \( c \); and
- otherwise, \( \text{Level}_{Adj,s}^c(t) \) is equal to the U.S. Dollar Level of Constituent \( c \) on the first Calculation Day from and including Calculation Day \( t \) to and including Calculation Day \( s \) that is not a Disrupted Day for the Component \( i \) which contains Constituent \( c \);

provided, however that if each Calculation Day \( s \) from and including Calculation Day \( t \) to and including Calculation Day \( t+5 \) is a Disrupted Day for the Component \( i \) which contains Constituent \( c \), then the Index Calculation Agent will determine \( \text{Level}_{Adj,s}^c(t) \) for Calculation Day \( s \) occurring on Calculation Day \( t+5 \) in good faith and in a commercially reasonable manner and such level determined by the Index Calculation Agent on Calculation Day \( t+5 \) will be the Final Adjusted U.S. Dollar Level for Constituent \( c \) with respect to Calculation Day \( t \), i.e. \( \text{Level}_{Adj,s}^c(t) \) will be equal to such value for each Calculation Day \( s \) occurring on or after \( t+5 \).
Step 1 will apply to the determination of the Adjusted Index Level with respect to any Calculation Day that is a Disrupted Day or any Calculation Day for which Calculation Day RD\(_{n-1}\) is a Disrupted Day. With respect to any Calculation Day that is a Calculation Day RD\(_{n-1}\), the Adjusted U.S. Dollar Level for any Constituent c will be notated as \(Level_{c, Adj, RD}^{\text{RD}_{n-1}}\) where such Adjusted U.S. Dollar Level is determined with respect to Calculation Day RD\(_{n-1}\) as of Calculation Day s.

To the extent that Component i consists of two Constituents, the Adjusted U.S. Dollar Level of the Constituent that is not affected by a Market Disrupted Event will be determined with respect to Calculation Day t as of Calculation Day s. In other words, if a Component i consists of two Constituents (for example, Constituent A1 and Constituent A2), \(Level_{Adj, s}^{A1}(t)\) and \(Level_{Adj, s}^{A2}(t)\) of Constituent A1 and Constituent A2, respectively, would be each determined as of Calculation Day s with respect to Calculation Day t, even if Constituent A2 considered separately was not disrupted on an earlier Calculation Day s.

For example, suppose that today (Monday) is Calculation Day t. The Index Calculation Agent would first seek to determine the Adjusted U.S. Dollar Level with respect to each Constituent, as of Calculation Day t. Suppose further that Monday is a Disrupted Day with respect to Constituent A1 which belongs to Component A (which also contains Constituent A2) but is not a Disrupted Day with respect to any other Constituent, including Constituent A2. To the extent that the Index contains Components other than Component A, the Index Calculation Agent would calculate the Adjusted U.S. Dollar Level for the Constituents of such Components as of such Calculation Day t, and the Adjusted U.S. Dollar Level for such Constituents would be the Final Adjusted U.S. Dollar Level. The Index Calculation Agent will also determine the Adjusted U.S. Dollar Levels for Constituent A1 and Constituent A2, and the Index Calculation Agent will calculate and publish an Index Level based on the Adjusted U.S. Dollar Level of all Constituents as of Calculation Day t. It should be noted that such Adjusted Index Level will not be tradable and that such level will not be adjusted after publication.

The Index Calculation Agent would then calculate the Adjusted U.S. Dollar Levels with respect to Constituent A1 and Constituent A2 on each subsequent Calculation Day s. These are the Adjusted U.S. Dollar Levels of Constituent A1 and Constituent A2 with respect to Calculation Day t as of Calculation Day s. On Tuesday, which is now Calculation Day s, the Index Calculation Agent would seek to determine the Final Adjusted U.S. Dollar Level of each such Constituent with respect to Calculation Day t (Monday); however, suppose Tuesday is a Disrupted Day with respect to Constituent A2. The level for the Constituents of Component A with respect to Calculation Day t (Monday) as of Calculation Day s (Tuesday) will be Adjusted U.S. Dollar Levels calculated as of Tuesday. On Wednesday, which is now Calculation Day s, the Index Calculation Agent will again seek to determine the Final Adjusted U.S. Dollar Level with respect to Calculation Day t (Monday). Wednesday is not a Disrupted Day for either Constituent A1 or Constituent A2, and therefore, the Adjusted U.S. Dollar Level of Constituent A1 and Constituent A2 will be determined as of such Calculation Day s (Wednesday) and such Final Adjusted U.S. Dollar Levels will be applied in determining the Final Adjusted Level of the Index with respect to Calculation Day t.

Step 2: Calculation of the Adjusted Period-To-Date Component Performance with respect to Calculation Day t as of Calculation Day s for Component i

If neither Calculation Day t nor Calculation Day RD\(_{n-1}\) is a Disrupted Day with respect to any Constituent c of Component i, then no alternative calculations are required for calculating the Period-To-Date Component Performance and the Index Calculation Agent will calculate the Period-To-Date Component Performance in accordance with Section 4 (Calculation and Determination of the Index Level) to these Standard Terms using the U.S. Dollar Levels of each Constituent c with respect to Calculation Day t as of Calculation Day t and with respect to Calculation Day RD\(_{n-1}\) as of Calculation Day RD\(_{n-1}\) accordingly, and the formulae set forth in this Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) to these Standard Terms shall not apply.
If Calculation Day \( t \) is a Disrupted Day with respect to any Constituent \( c \) of Component \( i \), the Index Calculation Agent will determine the Adjusted Period-To-Date Component Performance, or \( PTDCP_{Adj,i,t}^{sAdj} (t) \), of Component \( i \) with respect to Calculation Day \( t \) as of Calculation Day \( s \).

“\( PTDCP_{Adj,i,t}^{sAdj} (t) \)” means, with respect to Calculation Day \( t \) as of Calculation Day \( s \) for Component \( i \), the Adjusted Period-To-Date Component Performance calculated in accordance with the formula set forth under Section 4.5 (Calculating the Period-To-Date Component Performance for each Component) to these Standard Terms except that:

- each reference to the U.S. Dollar Level of a Constituent \( c \) on Calculation Day \( t \) shall instead refer to \( Level_{tAdj,s}^{c} (t) \);
- each reference to the U.S. Dollar Level of a Constituent \( c \) on Calculation Day \( RD_{n-1} \) shall instead refer to \( Level_{tAdj,s}^{c} (RD_{n-1}) \).

Notwithstanding the foregoing, with respect to the calculation of the Short Constituent Leverage for any Component (if applicable) and the Index Leverage (if applicable) as determined in accordance with Section 4 (Calculation and Determination of the Index Level) to these Standard Terms, references to the U.S. Dollar Level of Constituent \( c \) on Calculation Day \( t \) shall instead refer to \( Level_{tAdj,s}^{c} (t) \), which is equal to the U.S. Dollar Level of Constituent \( c \) on Calculation Day \( t \) except that if such day is a Non-Publication Day for Constituent \( c \), \( Level_{tAdj,s}^{c} (t) \) will be equal to the U.S. Dollar Level of such Constituent on the latest Calculation Day preceding Calculation Day \( t \) for which a U.S. Dollar Level of such Constituent \( c \) is available.

Step 2 will apply to the determination of the Adjusted Period-To-Date Component Performance with respect to any Component \( i \) and any Calculation Day \( t \) that is a Disrupted Day for Component \( i \), or any Calculation Day \( t \) for which Calculation Day \( RD_{n-1} \) is a Disrupted Day for Component \( i \). With respect to any Calculation Day \( t \) that is a Calculation Day \( RD_{n-1} \), the Adjusted Period-To-Date Component Performance for any Component \( i \) will be notated as \( PTDCP_{Adj,i,t}^{RD_{n-1}} (RD_{n-1}) \) where such Adjusted Period-To-Date Component Performance is determined with respect to Calculation Day \( RD_{n-1} \) as of Calculation Day \( s \).

**Step 3: Calculation of the Adjusted Index Level with respect to Calculation Day \( t \) as of Calculation Day \( s \)**

If neither Calculation Day \( t \) nor Calculation Day \( RD_{n-1} \) is a Disrupted Day with respect to any Constituent, then no alternative calculations are required and the Index Calculation Agent will calculate the Index Level in accordance with Section 4 (Calculation and Determination of the Index Level) to these Standard Terms using the U.S. Dollar Levels of each Constituent with respect to Calculation Day \( t \) and/or Calculation Day \( RD_{n-1} \) as applicable, and the formulae set forth in this Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) to these Standard Terms shall not apply. The Index Calculation Agent will calculate and publish the Index Level with respect to Calculation Day \( t \) as of Calculation Day \( s \), and this will be a tradable level.

If Calculation Day \( t \) (or Rebalancing Date \( n-1 \)) is a Disrupted Day with respect to a Constituent \( c \) of Component \( i \), the Index Calculation Agent will calculate the Adjusted Index Level with respect to such Calculation Day \( t \) as of each Calculation Day \( s \), applying the alternative calculations set forth in Steps 1 and 2 above to the following formula:

\[
Index_{Adj,j}^{sAdj} (t) = \left[ Index_{Adj,j}^{RD_{n-1}} (RD_{n-1}) + Index_{Adj,RD_{n-1}}^{c} (RD_{n-1}) \times IndexLeverage(RD_{n-1}) \times \sum_{i=1}^{NS} W_i \times PTDCP_{Adj,i,t}^{RD_{n-1}} (t) \right] \times (1 - RAF_i)
\]

where
“\textit{Index}_{\text{Adj,}t}(t)\text{ ” means, with respect to Calculation Day } t \text{ as of Calculation Day } s, the “Adjusted Index Level” with respect to Calculation Day } t \text{ as of Calculation Day } s;

“\textit{Index}_{\text{Adj,}RD_{n-1}}(RD_{n-1})\text{ ” means, with respect to Calculation Day } RD_{n-1} \text{ as of Calculation Day } s, the Adjusted Index Level with respect to Calculation Day } RD_{n-1} \text{ as of Calculation Day } s. \text{ For the avoidance of doubt, } \textit{Index}_{\text{Adj,}RD_{n-1}}(RD_{n-1}) \text{ may continue to change for as many as 5 Calculation Days following the Rebalancing Date } RD_{n-1}, \text{ in the case that on Calculation Day } s \text{ there is a Market Disruption Event that is relevant to a Constituent of the Index connected with the rebalancing of the Index on Calculation Day } RD_{n-1};

“\textit{Index}_{\text{Adj,RD}_{n-1}}(RD_{n-1})\text{ ” means, with respect to Calculation Day } RD_{n-1}, the Index Level (calculated pursuant to Section 4) or Adjusted Index Level (calculated pursuant to this Section 6) determined as of Calculation Day } RD_{n-1}. \text{ For the avoidance of doubt, such Index Level or Adjusted Index Level (as applicable) will not be adjusted subsequently on any Calculation Day } s \text{ and will be calculated with unadjusted U.S. Dollar Levels for any Constituent } c \text{ with respect to Calculation Day } RD_{n-1} \text{ in the Index; provided, however that if such Rebalancing Date is a Non-Publication Day for any Constituent } c, \text{ such level will be calculated using the } \textit{Level}_{c\text{,Adj,RD}_{n-1}}(RD_{n-1}), \text{ which is equal to the U.S. Dollar Level of Constituent } c \text{ on the latest Calculation Day preceding Calculation Day } RD_{n-1} \text{ for which a U.S. Dollar Level of such Constituent } c \text{ is available;}

“\textit{IndexLeverage}(RD_{n-1})\text{ ” will be determined in accordance with the formula set forth in Section 4 (Calculation and Determination of the Index Level) to these Standard Terms; provided, however that references to the U.S. Dollar Level of Constituent } c \text{ on Calculation Day } t \text{ shall mean } \textit{Level}_{c\text{,Adj}}(t), \text{ which is equal to the U.S. Dollar Level of Constituent } c \text{ on Calculation Day } t, \text{ except that if such day is a Non-Publication Day for Constituent } c, \textit{Level}_{c\text{,Adj}}(t) \text{ will be equal to the U.S. Dollar Level of such Constituent on the latest Calculation Day preceding Calculation Day } t \text{ for which a U.S. Dollar Level of such Constituent } c \text{ is available.}

“\textit{PTDCP}_{\text{Adj,}t}(t)\text{ ” will have the meaning set forth in Step 2 of this Section 6 (Market Disruption Events and the Calculation and Determination of the Index Level upon the Occurrence or Continuation of a Market Disruption Event) to these Standard Terms.}

Upon request, the Index Calculation Agent will make available the Final Adjusted Level for such Index as such Final Adjusted Level is applicable to any Calculation Day } t.

6.7 Alternative Calculations upon a Market Disruption Events for Total Return Indices

For any Index that is a total return index, if a Market Disruption Event has occurred on any Calculation Day from and including Calculation Day RDn-1 through and including Calculation Day } t \text{ (the “Calculation Period”), the Index Level for such total return index will be calculated in accordance with this Section 6.7.

If any Calculation Day in the Calculation Period is a Disrupted Day, the Index Calculation Agent will determine the Adjusted U.S. Dollar Level of any Constituent } c, \text{ which we refer to as } \textit{Level}_{c\text{,Adj}}(t), \text{ with respect to such Calculation Day as of such Calculation Day. \text{ For example, if a Market Disruption Event has occurred or is continuing with respect to Constituent } c, \text{ the Index Calculation Agent will use the disrupted level of such Constituent } c \text{ on such Calculation Day without regard to any postponement. With respect to each Calculation Day in the Calculation Period that is a Disrupted Day, the Index Calculation Agent will apply that } \textit{Level}_{c\text{,Adj}}(t) \text{ in the calculation of the Adjusted Index Level as of Calculation Day } t \text{ for each}
Calculation Day in the Calculation Period that is a Disrupted Day. In other words, the Adjusted Index Level as of Calculation Day t is path dependent relative to each Calculation Day in the Calculation Period and the Index Calculation Agent will apply an Adjusted U.S. Dollar Level for any Constituent c (i.e., \( \text{Level}_{\text{Adj.},c}(t) \)) to determine an Adjusted Index Level on which to apply the T-Bill Return.

If Calculation Day t is a Disrupted Day with respect to a Component i, and a Constituent c is contained in Component i, the Index Calculation Agent will determine the Adjusted U.S. Dollar Level of Constituent c, which we refer to as \( \text{Level}_{\text{Adj.},c}(t) \), with respect to Calculation Day t as of Calculation Day s (where Calculation Day s is not earlier than Calculation Day t) as follows:

- if each Calculation Day from and including Calculation Day t to and including Calculation Day s is a Disrupted Day for Component i that contains Constituent c, \( \text{Level}_{\text{Adj.},c}(t) \) is equal to the U.S. Dollar Level of Constituent c on Calculation Day s; and
- otherwise, \( \text{Level}_{\text{Adj.},c}(t) \) is equal to the U.S. Dollar Level of Constituent c on the first Calculation Day from and including Calculation Day t to and including Calculation Day s that is not a Disrupted Day for the Component i which contains Constituent c;

provided, however that if each Calculation Day s from and including Calculation Day t to and including Calculation Day t+5 is a Disrupted Day for the Component i which contains Constituent c, then the Index Calculation Agent will determine \( \text{Level}_{\text{Adj.},c}(t) \) for Calculation Day s occurring on Calculation Day t+5 in good faith and in a commercially reasonable manner and such level determined by the Index Calculation Agent on Calculation Day t+5 will be the Final Adjusted U.S. Dollar Level for Constituent c with respect to Calculation Day t, i.e. \( \text{Level}_{\text{Adj.},c}(t) \) will be equal to such value for each Calculation Day s occurring on or after t+5.

Based on the calculations above, the Adjusted Index Level will be determined on each Calculation Day t as of Calculation Day s as follows:

\[
\text{Index}_{\text{TR},\text{Adj.},c}(t) = \text{Index}_{\text{TR},\text{Adj.},c-1}(t-1) \times \left[ \frac{1 + \text{IndexLeverage}(RD_{n-1}) \times \sum_{i=1}^{N} \left( W_i \times \text{PTDCP}_{\text{adj.},i,s}(t) \right)}{1 + \text{IndexLeverage}(RD_{n-1}) \times \sum_{i=1}^{N} \left( W_i \times \delta(t-1) \times \text{PTDCP}_{\text{adj.},i,s}(t-1) \right)} \right] + TBR_c \times (1 + TBR_c)^{\delta(t)} \times (1 - 
\]

where

“\( \text{Index}_{\text{TR},\text{Adj.},c}(t) \)” means, with respect to Calculation Day t, the Adjusted Index Level with respect to Calculation Day t as determined by the Index Calculation Agent as of Calculation Day s;

“\( \text{Index}_{\text{TR},\text{Adj.},c-1}(t-1) \)” means, with respect to Calculation Day t, the Index level (calculated pursuant to Section 4) or Adjusted Index Level (calculated pursuant to this Section 6) on Calculation Day t-1, as applicable, for such total return index determined by the Index Calculation Agent by applying \( \text{Level}_{\text{Adj.},c}(t) \) for each Constituent c as determined on Calculation Day t-1 as of Calculation Day t-1, regardless of whether such Calculation Day t is a Disrupted Day;

“\( \text{IndexLeverage}(RD_{n-1}) \)” will be determined in accordance with the formula set forth in Section 4 (Calculation and Determination of the Index Level) to these Standard Terms; provided, however that references to the U.S. Dollar Level of Constituent c on Calculation Day t shall mean \( \text{Level}_{\text{Adj.},c}(t) \), which is equal to the U.S. Dollar Level of Constituent c on Calculation Day t, except that if such day is a Non-
Publication Day for Constituent c, \( \text{Level}^{\text{Adj}, c}_{t}(t) \) will be equal to the U.S. Dollar Level of such Constituent on the latest Calculation Day preceding Calculation Day \( t \) for which a U.S. Dollar Level of such Constituent \( c \) is available.

“PTD\( \text{CP}^{\text{Adj}, i,s}_{t}(t) \)” means, with respect to Calculation Day \( t \), the Adjusted Period-To-Date Component Performance for each Component \( i \) as determined with respect to Calculation Day \( t \) as of Calculation Day \( s \) as determined in accordance with Section 4.5 (Calculating the Period-To-Date Component Performance for each Component) to these Standard Terms, except that the Index Calculation Agent will determine such value by reference to \( \text{Level}^{\text{Adj}, c}_{t}(t) \) for each Constituent \( c \) as determined with respect to Calculation Day \( t \) as of Calculation Day \( s \).

“PTD\( \text{CP}^{\text{Adj}, i,s}_{t-1}(t) \)” means, with respect to Calculation Day \( t \), the Adjusted Period-To-Date Component Performance for each Component \( i \) as determined with respect to Calculation Day \( t-1 \) as of Calculation Day \( s \) as determined in accordance with Section 4.5 (Calculating the Period-To-Date Component Performance for each Component) to these Standard Terms, except that the Index Calculation Agent will determine such value by reference to \( \text{Level}^{\text{Adj}, c}_{t-1}(t-1) \) for each Constituent \( c \) as determined with respect to Calculation Day \( t-1 \) as of Calculation Day \( s \).

\( \delta(t-1) \) is equal to 0 if Calculation Day \( t-1 \) is a Rebalancing Date, otherwise 1

Upon Request, the Index Calculation Agent will make available the Final Adjusted Level for such Index as such Final Adjusted Level is applicable to any Calculation Day \( t \).

6.8 Publication

The level of the Index Level calculated and published by the Index Calculation Agent with respect to each Calculation Day \( t \) shall be \( \text{Index}^{\text{Adj}, i}_{t}(t) \) or \( \text{IndexTR}^{\text{Adj}, i}_{t}(t) \), as applicable, that is the Initial Adjusted Level for the Index, which agrees with the calculation of \( \text{Index}(t) \) as defined in Section 4 (Calculation and Determination of the Index Level) to these Standard Terms in the circumstances described in the paragraph immediately above.

6.9 Tradable Level

The tradable level of the Index Level with respect to each Calculation Day \( t \) shall be \( \text{Index}^{\text{Adj}, i}_{t}(t) \) or \( \text{IndexTR}^{\text{Adj}, i}_{t}(t) \) as of Calculation Day \( s \), provided that this level is the Final Adjusted Level of the Index Level with respect to Calculation Day \( t \) (where in any case Calculation Day \( s \) shall be no later than \( t+5 \)).

6.10 T-Bill Rate

The following actions will be taken by the Index Calculation Agent following any abnormalities in the publication of the T-Bill Rate, only if a Total Return Index is defined and published by the Index Calculation Agent as specified in the Index Supplement.

If, with respect to a Calculation Day, such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto), the rate for that date will be the Bond Equivalent Yield of the rate displayed in H.15 Daily Update, currently http://www.federalreserve.gov/releases/h15/update/, (or any official successor page thereto), or such other recognized electronic source used for the purpose of displaying such 3-month T-bill rate for that day under the caption "U.S. Government Securities/Treasury bills/Auction high" converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.
If such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto) and such 3-month rate is not displayed in the H.15 Daily Update under the caption "U.S. Government securities/Treasury bills/Auction high" or another recognized electronic source, the rate for that date will be the Bond Equivalent Yield of the auction rate for those Treasury Bills as announced by the United States Department of Treasury, converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If the rate for United States 3-month Treasury Bills is still not available, the rate will be determined by Calculation Agent in good faith and in a commercially reasonable manner.

7. Extraordinary Events

7.1. Successor Constituent

If any Constituent is (a) not calculated and announced by the Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or (b) replaced by a successor index using, in the determination of the Index Calculation Agent, the same or substantially similar formula for and method of calculation as used in the calculation of such Constituent, then such index will be deemed to be the index so calculated and announced by that successor index sponsor or that successor index, as the case may be.

7.2. Material Change in the Method or Formula of Calculating a Constituent

If on or prior to any Calculation Day on which the Index Calculation Agent is determining the Index Level of the Index, the Index Sponsor makes a material change in the formula for or the method of calculating a relevant Constituent (other than a modification prescribed in that formula or method to maintain such index in the Constituent or prescribed routine events) which affects the ability of the Index Calculation Agent to calculate the Index Level, then the Index Calculation Agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology or detail in the relevant Index Supplement or any other rule or input in relation to the Index to account for such modification.

7.3. Non-Publication of the Constituent as a result of Cancellation of a Constituent

On or prior to any Calculation Day on which the Index Calculation Agent is determining the Index Level of the Index, if an Index Sponsor permanently cancels the relevant Constituent, and no successor index exists, the Index Calculation Agent shall, in good faith, either:

(a) continue to calculate the Index Level of the relevant Index using the latest terms specified in the Index Supplement at the time the Constituent was cancelled; or

(b) make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to the relevant Index to account for such cancellation, including but not limited to excluding or substituting a relevant Constituent.

7.4. Change in Law Event

Without prejudice to the ability of the Index Calculation Agent to amend the Index Rules (see Section 8 herein), the Index Calculation Agent may, acting in good faith and in a commercially reasonable manner:

(a) exclude; or

(b) substitute,
any Constituent following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Index, including (without prejudice to the generality of the foregoing) any perception among market participants generally that the published price of the relevant Constituent is inaccurate (and the Relevant Exchange fails to correct such level of the underlying futures contract or Index Sponsor fails to correct such level of the Underlying Index), and if it so excludes or substitutes any Constituent, then the Index Calculation Agent may adjust the Index Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the Index Calculation Agent. The Index Calculation Agent is under no obligation to continue the calculation and publication of any Index upon the occurrence or existence of a Change in Law; and the Index Calculation Agent may decide to cancel any Index if it determines, acting in good faith, that the objective of the relevant Index can no longer be achieved.

7.5. Cancellation of an Index License relating to a Constituent

With respect to any Index, if, at any time, the license granted to the Index Calculation Agent (or its affiliates) to use any Constituent for the purposes of the Index terminates, or the Index Calculation Agent’s rights to use any Constituent for the purpose of the Index is otherwise disputed, impaired or ceases (for any reason), the Index Calculation Agent may (a) remove such Constituent from the Index or (b) replace such Constituent with a successor Constituent that is the same or substantially similar and may make such adjustments to these Standard Terms and the relevant Index Supplement, each as it determines in good faith to be appropriate to account for such event on such dates as selected by the Index Calculation Agent.

8. Additional Terms

8.1. Amendments

These Standard Terms may be amended from time to time at the discretion of the Index Calculation Agent and will be re-published (in a manner determined by the Index Calculation Agent from time to time) no later than thirty (30) calendar days following such amendment.

The Standard Terms, when read together with the relevant Index Supplement, are intended to be comprehensive; however, ambiguities may arise. If an ambiguity does arise, the Index Calculation Agent will resolve such ambiguities and, if necessary, amend the Standard Terms or the Index Supplement, as applicable, to reflect such resolution.

8.2. Not An Offer to Sell or Solicitation to Buy Securities

These Standard Terms, together with the relevant Index Supplement, do not constitute either an offer to sell or a solicitation to buy securities. Any such offer to sell or solicitation to buy securities in the relevant jurisdiction in which such securities are being offered or purchased will be accompanied by an offering document that is prepared with respect to that jurisdiction’s laws and regulation.

8.3. No Investment Advice and No Fiduciary Duty

The Index Calculation Agent and its affiliates, officers, agents or employees (a) have not rendered legal, regulatory, investment, tax, accounting or other advice to an investor in relation to any product that is linked to or references an Index and (b) are not fiduciaries under applicable law governing such product or in the jurisdiction in which any investor purchases a product that is linked to or references an Index. Each investor should make its own investment decision based on its own judgment and on its own examination of the relevant Index and the applicable product, and each investor should consult its own legal, regulatory, investment, tax, accounting and other professional advisers as it deems necessary in connection with the relevant transaction.
8.4. **Index Calculation Agent; Index Calculation Standards and Index Calculation Determinations**

Unless otherwise specified in the relevant Index Supplement, J.P. Morgan Securities Ltd. or any affiliate or subsidiary designated by it will act as calculation agent in connection with each Index.

The Index Calculation Agent shall act in good faith and in a commercially reasonable manner with respect to determinations made by it pursuant to the Index Rules for an Index. All determinations of the Index Calculation Agent pursuant to these Standard Terms and the Index Supplement for an Index and interpretation of these Standard Terms and the Index Supplement will be final, conclusive and binding and no person shall be entitled to make any claim against the Index Calculation Agent or any of the Relevant Persons in respect thereof. Neither the Index Calculation Agent nor any Relevant Person shall:

(a) be under any obligation to revise any determination or calculation made or action taken for any reason in connection with the Index Rules for an Index or an Index; or

(b) have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) with respect to an Index or with respect to the publication of any Index Level (or failure to publish such level) or any use to which any person may put an Index or the Index Levels.

8.5. **Index Corrections**

With respect to any Index,

(a) if the level of a Constituent, variable or other input that is used for any calculation relevant to the Index Level for any Calculation Day is subsequently corrected and the correction is published by the relevant Index Sponsor or relevant publication source; or

(b) if the Index Calculation Agent identifies an error or omission in any of its calculations or determinations with respect to the Index for any Calculation Day,

then, the Index Calculation Agent may, if practicable and it considers such correction material, adjust or correct the Index Level for such Calculation Day and/or each subsequent affected Calculation Day. The Index Calculation Agent will publish (in such manner determined by the Index Calculation Agent) corrected Index Level(s) as soon as reasonably practicable.

8.6. **Index Cancellation**

If the Index Calculation Agent determines that any adjustment that can be made with respect to any Extraordinary Event (see Section 7 herein) cannot or would not produce a commercially reasonable result, then the Index Calculation Agent may cease calculating and publishing the Index from the date of such determination by the Index Calculation Agent.

9. **Disclaimer and Conflicts of Interest**

The following disclaimer and disclosure relating to our conflicts of interests applies to each Index that reference these Standard Terms. References herein apply to each Index that is described in the relevant Index Supplement, which incorporates the terms set forth herein.

The information contained in these Standard Terms and the relevant Index Supplement (together, the “Index Rules”) is accurate as of the date specified in the relevant Index Supplement (and may change at any time without prior notice), and neither JPMorgan nor any of its affiliates or subsidiaries or their respective directors, officers, employees, representatives, delegates or agents (each a “Relevant Person”) is under any obligation to update such information. These Index Rules have been prepared by JPMorgan, and are not a
product of JPMorgan’s research departments. Opinions expressed herein may differ from the opinions expressed by other areas of JPMorgan, including its research departments.

None of the Relevant Persons makes any representation or warranty, whatsoever, express or implied, as to the results that may be obtained through use of these Index Rules or through an investment linked to an Index described herein and in the relevant Index Supplement. Each Relevant Person hereby expressly disclaims, to the fullest extent permitted by law, all warranties of accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any information contained in this document and no Relevant Person shall have any liability (direct or indirect, punitive consequential or otherwise) to any person even if notified of the possibility of any such damages.

During the course of their normal business, any Relevant Person may enter into or promote, offer or sell financial instruments or investments (structured or otherwise) linked to the Index, commodities generally or the commodity indices referenced in the Index. In addition, any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the Index, commodities generally or commodity indices referenced therein, or related derivatives, or may invest or engage in transactions with other persons, or on behalf of such persons, relating to the Index, commodities generally or commodity indices. Such activity may have an adverse impact on the liquidity of the commodity markets and on the spot prices, forward rates, futures prices and index values referenced by the Index. In some cases, these activities and transactions may have an adverse affect on the performance of the Index. None of the Relevant Persons have any duty to consider the circumstances of any person when participating in such transactions or to conduct themselves in a manner that is favourable to anyone with exposure to the Index.

The Index Rules have been developed with the possibility of the Index Calculation Agent or any of the Relevant Persons entering into or promoting, offering or selling transactions or investments (structured or otherwise) linked to the Indices, and hedging the obligations that might arise under any such transactions or investments. These Index Rules are not intended as a recommendation, offer or solicitation for (i) the purchase or sales of any security or financial instrument or (ii) participation in any transaction. These Index Rules should not be used to evaluate the advantages and disadvantages of any security or financial instrument linked to the Index or otherwise participating in any transaction referencing the Index. Such evaluation should be made solely on the basis of the information contained in the relevant terms supplement, product supplement, term sheet, offering memorandum, private placement memorandum or prospectus (collectively, each an “Offering Documents”) when available. Those Offering Documents will contains the terms of any security and will supersede all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials, including this strategy guide. All persons should conduct their own investigations and consult with their own professional advisors when evaluating these Index Rules and the Index without reliance on any Relevant Person. None of the Relevant Persons is a fiduciary or advisor to any person interested in obtaining exposure to the Index.

The Index Calculation Agent or any of its affiliates or any of the Relevant Persons may publish research, express opinions or provide recommendations (for example, with respect to the commodities or indices that may be included in the Index) that are inconsistent with investing in instruments linked to the Index, and which may be revised at any time. Any such research, opinions or recommendations may or may not recommend that investors buy or hold the relevant commodities or indices and could affect the value and or performance of the Index or of instruments linked to the Index.

The Index represents a portfolio of various potential commodity indices or commodity exchange traded futures contracts, with each commodity index or commodity exchange traded futures contract providing exposure to a specific commodity. The Index has a limited operating history and any hypothetical performance history of the strategy merely identifies certain hypothetical trading positions, the performance of which do not provide a basis for evaluating or anticipating the future performance of the Index.

The Index Disclaimer
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The Index Calculation Agent is under no obligation to continue the calculation, publication and dissemination of the Index, or of any indices or strategies that may be potential components of the Index. The Index Calculation Agent need not publish the index level(s), Index Level(s) or similar information related to the Index if the relevant Bloomberg ticker (as identified in the relevant Index Supplement) is subject to any delay in or interruptions of publication for any reason including the occurrence of an Extraordinary Event (as defined herein).

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