

# Macquarie 312 Roll Yield Enhanced Beta Index

**Index Manual  
September 2020**

## IMPORTANT INFORMATION

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### BASIS OF PROVISION

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This document (the **Index Manual**) sets out the rules for the Macquarie 312 Roll Yield Enhanced Beta Index (the **Index**) and reflects the methodology for determining the composition and calculation of the Index (the **Methodology**). The Methodology and the Index derived from this Methodology are the exclusive property of Macquarie Bank Limited (the **Index Administrator**). The Index Administrator owns the copyright and all other rights to the Index. They have been provided to you solely for your internal use and you may not, without the prior written consent of the Index Administrator, distribute, reproduce, in whole or in part, summarize, quote from or otherwise publicly refer to the contents of the Methodology or use it as the basis of any financial instrument.

### SUITABILITY OF INDEX

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The Index and any financial instruments based on the Index may not be suitable for all investors and any investor must make an independent assessment of the appropriateness of any transaction in light of their own objectives and circumstances including the potential risks and benefits of entering into such a transaction. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

**This Index Manual assumes the reader is a sophisticated financial market participant, with the knowledge and expertise to understand the financial mathematics and derived pricing formulae, as well as the trading concepts, described herein. Any financial instrument based on the Index is unsuitable for a retail or unsophisticated investor.**

### RISK FACTORS

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See the risk factors relating to Macquarie indices in the document headed ‘Macquarie Proprietary Indices – Risk Factors’ provided to you with this Index Manual (the **Risk Factors**). Investors should note in particular the following sections of the Risk Factors: *Part 1 (General Risk Factors) and paragraphs 1 (Component Index) and 3 (Commodity Indices) of Part 2 (Part 2 – Asset Class Specific Risk Factors)*. A copy of the Risk Factors may be obtained free of charge upon request to the Index Administrator.

The following list contains certain additional risk factors associated with an investment in a financial instrument linked to the Index. The following list is not intended to be exhaustive and there may be additional risks in general or risks specific to a particular investor which are not included below. If you are in any doubt about any of the contents below, you should obtain independent professional advice.

Prospective investors in the Index should be familiar with investments in commodity markets, financial instruments and indices in general.

- (i) There can be no assurance as to the future performance of the Index. The Index level may go down as well as up, depending on the performance of the components that are included in the Index. Other strategies that use different methodologies may outperform the index.

- (ii) The performance of the Index is dependent on the weighted performance of all of the constituents contained in the Index. Fluctuations in the level, price, rate or value (as applicable) of the constituents contained in the Index will directly affect the Index Level.
- (iii) There can be no assurance that Index Levels will remain positive. The Index Level can become negative under certain market conditions (e.g. if there is a large move in the market that affects one or more Components of the Index to a large extent). Such events that cause the Index to become negative can result in a substantial loss to Investors in an index-linked product.
- (iv) The correlation between the constituents that comprise the Index may change unpredictably which can adversely impact performance.
- (v) Supply and demand fundamentals may affect commodities differently and may contribute to the performance (positive or negative) of the strategy. Prospective investors should be aware that these adverse performances may be very large and can be in the order of many magnitudes of the worst historic performances throughout the simulated or past performance. In such scenarios the Index level can also turn negative and can result in a substantial loss to investors in an index-linked product.

## HISTORICAL DATA

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The Index has been calculated since the Index Live Date but historical levels have been produced by a back-test process from the Index Start Date. For more information, see Section 8.3 (*Historical Values of the Index*).

## CONFLICTS AND USE OF DISCRETION

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For operational reasons the Index may, in limited circumstances, permit the exercise of discretion by the Index Calculation Agent (acting in good faith and in a commercially reasonable manner). For further information see Section 6.4 (*Discretion*).

For information on potential conflicts, see Section 7.3 (*Conflicts*).

## CESSATION OR MODIFICATION OF THE INDEX

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If you have been granted written consent by the Index Administrator to reference the Index in any contract or financial instrument, you should include in such contract or financial instrument robust fallback provisions to deal with cessation or material modification of the Index.

For information on corrections, changes and cessation of the Index, see Section 6 (*Corrections, Changes, Cessation and Discretion*).

## DISCLAIMER OF LIABILITY

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The Methodology is published for information purposes only and does not create any legally binding obligation on the part of the Index Administrator, the Index Calculation Agent and/or their affiliates. This document is intended to provide a summary of the index it purports to describe. The Index Administrator expressly disclaims (to the fullest extent permitted by applicable law) all warranties (express, statutory or implied) regarding this document and the Methodology or the Index, including but not limited to, all warranties of merchantability, fitness for a particular purpose (including investment by regulated funds) and all warranties arising from course of performance, course of dealing or usage of trade and their equivalents under applicable laws of any jurisdiction. In particular, the Index Administrator and the Index Calculation Agent do not warrant or guarantee the completeness or accuracy of the Index or timeliness of calculations of any Index Level and do not warrant or guarantee the availability of any Index Level on any particular date or at any particular time. The Index Administrator and the Index Calculation Agent shall have no liability to any person for delays, omissions or interruptions in the delivery of the Index, including as a result of the failure of prices to be published in respect of an Underlying Contract or, as applicable, any other reference value for any reason; or as a result of a Contract failing to trade for any reason. Although the Index Calculation Agent will obtain information concerning Underlying Contracts and or reference values from publicly available sources it believes to be reliable, it will not independently verify this information. Accordingly, no representation, warranty or undertaking (express or implied) is made by the Index Administrator or the Index Calculation Agent as to the accuracy and completeness of information concerning any Index.

In particular, the Index Administrator and the Index Calculation Agent shall not be liable (whether in contract, tort or otherwise) for any losses (including direct, indirect, special, punitive or other damages (including loss of profits)) resulting from (i) any determination that a Market Disruption Event, an Adjustment Event or an Error has occurred or has not occurred (ii) the timing relating to the determination that a Market Disruption Event, an Adjustment Event or an Error has occurred, or (iii) any actions taken or not taken by the Index Calculation Agent as a result of such determination that a Market Disruption Event, an Adjustment Event or an Error has occurred.

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## SECTION 1: OVERVIEW

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### 1.1 INTRODUCTION AND INDEX OBJECTIVE

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The Macquarie 312 Roll Yield Enhanced Beta Index (hereinafter, the **Index**) is designed to take exposure to commodity markets across a diversified set of 19 commodities spread across Energy, Industrial Metals and Precious Metals. The Index aims to reduce and/or conversely, enhance, the realized roll yields by implementing the exposure through the Macquarie Roll Yield Enhanced Indices for Components with sufficient capacity.

In commodities, the shape of the futures curve is mainly affected by the costs of storage and supply and demand conditions of the underlying commodity. Commodities where demand outpaces supply generally being in “backwardation” (where the price of the commodity’s futures contract is higher at the front of the futures curve than the back) and those commodities which are oversupplied generally being in “contango” (where the price of the commodity’s futures contract is higher at the back of the futures curve than the front). The roll yield is the amount of return generated from the convergence of a deferred futures contract price towards the spot price. In a backwardated market, the roll yields are positive, as the lower price of a deferred futures contract converges to the higher spot price. Conversely, when a market is in contango, roll yields are negative. The Macquarie Roll Yield Enhanced Indices aim to maximize the roll yields by dynamically selecting the contract with the highest implied roll yield (which will realize the highest roll yield return in a scenario where the futures curve shape stays the same ).

The Index is designed to be replicable and readily accessible to market participants. It is calculated daily in an excess return and total return format.

### 1.2 INDEX CALCULATION

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The Index is calculated and maintained by the Index Calculation Agent and supervised by the Index Administrator and the Index Oversight Committee, as described in Section 7 (*Oversight, Roles and Conflicts*). All determinations with regard to the Index are made following the rules set out in this document, without discretion by the Index Administrator or the Index Calculation Agent, other than in the limited circumstances set out in this document – see Section 6 (*Corrections, Changes, Cessation and Discretion*) for further information.

The Index is not based upon submissions provided by third parties (or an affiliate of the Index Administrator or the Index Calculation Agent). The Index is based upon actual transaction data sourced from regulated markets and exchanges.

### 1.3 METHODOLOGY

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The Methodology for calculating the Index is described in the Section 2 (*Index Methodology*).

## SECTION 2: INDEX METHODOLOGY

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On a daily basis the Index seeks to replicate synthetically the returns obtained by notionally holding a basket of Components, the Weights of which are defined in Table 1 under the definition of Components in Section 4 (*Definitions*) and rebalanced periodically according to Section 2.2 (*Holdings Calculation*). The following sections detail how the Index Calculation Agent will calculate the daily Index Levels of the Index:

- **Section 2.1** describes the Components and the universe of Commodities to which each Component takes exposure;
- **Section 2.2** describes the calculation of Holdings, which are intermediate calculations that enable the Index Calculation Agent to reflect the changes stemming from the Index rebalance in the returns of the Index; and
- **Section 2.3** describes the day-to-day calculation of the Index Level.

### 2.1 THE UNIVERSE OF SELECTABLE COMMODITIES

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The Index invests in a universe of 19 different commodities across energy, industrial metals and precious metals, chosen to have sufficient liquidity in the Underlying Contracts to sustain the trading activity resulting from the expected levels of investment in the Index.

Information on the Macquarie Single Commodity Indices and Macquarie Single Commodity Roll Yield Enhanced Indices can be found in their respective Index Manuals, available at:

<https://www.macquarie.com/uk/en/about/company/commodities-and-global-markets/commodities/commodity-index-documentation.html>

### 2.2 HOLDINGS CALCULATION

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On any Index Business Day  $t$ , each Component  $i$  has a Holding,  $H_{i,t}$ , associated with it. This Holding represents the proportion in which the Index Level will change when the level of that Component changes. In this section, we outline the Holdings,  $\{H_{1,t}, \dots, H_{n,t}\}$ , calculations on any Index Business Day  $t$ .

On each Holdings Calculation Date, the Holding of each Component  $i$ , is rebalanced in accordance with the Target Holdings and the Weights.

#### 2.2.1 Target Holdings Calculation on a Holdings Calculation Date

The calculation of the Target Holdings on a Holdings Calculation Date  $R$ , requires as input the set of Weights in respect of that Holdings Calculation Date  $R$  and the Component Levels of the Components on the Index Business Day immediately preceding such Holdings Calculation Date  $R$ .

On any Holdings Calculation Date  $R$ , let the Weight of each Component  $i$  be denoted by  $W_{i,R}$  so that  $\{W_{1,R}, \dots, W_{n,R}\}$  are the Weights of the  $n$  Components in the Index, as specified in Table 1 under the definition of Components in Section 4 (*Definitions*). Analogously, let  $\{C_{1,R-1}, \dots, C_{n,R-1}\}$  be the set of Component Levels of the Components on the Index Business Day immediately preceding the Holdings Calculation Date  $R$ . The Index Target Holdings,  $\{TH_{1,R}, \dots, TH_{n,R}\}$ , for each of the  $n$  Components in the Index are calculated according to the formula below:



$$TH_{i,R} = I_{R-1} \times \frac{W_{i,R}}{C_{i,R-1}} \text{ for every Component } i = 1, \dots, n$$

Where  $I_{R-1}$  is the Index Level on the Index Business Day immediately preceding Holdings Calculation Date  $R$ .

For example, if, on the Index Business Day preceding a Holdings Calculation Date  $R$ , the Index level is 100, the Component Level is 80 and the Weight of that Component is 40%, then the Target Holding of that Component in respect of that Holdings Calculation Date will be equal to:  $100 \times (0.4) / 80 = 0.5$ .

### 2.2.2 Daily Holdings Calculation

On any Index Business Day  $t$ , the set of Holdings  $\{H_{1,t}, \dots, H_{n,t}\}$  is calculated according to the following rules:

- (i) If Index Business Day  $t$  is the Index Business Day immediately following the Holdings Calculation Date  $R$ , the Holdings  $\{H_{1,t}, \dots, H_{n,t}\}$  for each of the  $n$  Components in the Index are calculated according to the formula below:

$$H_{i,t} = TH_{i,R} \text{ for every Component } i = 1, \dots, n$$

- (ii) On any other Index Business Day  $t$ , the Holding of each Component  $i$  on such Index Business Day  $t$ ,  $H_{i,t}$ , is set to be equal to the Holding of that particular Component on the previous Index Business Day,  $H_{i,t-1}$ .

## 2.3 DAILY INDEX CALCULATION

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The Index is available in both an Excess Return and a Total Return format.

The Excess Return Index represents the performance of a synthetic, unfunded exposure to the Underlying Contracts in an index. That is, the Index tracks what an investor would receive if it purchased or sold the futures contracts ultimately underlying the Index without taking into consideration the cost of investment capital. On each Index Business Day  $t$ , the Excess Return level of the Index (the Index level,  $I_t$ ), is calculated (rounded to eight decimal places) based on the value of the Excess Return of the Index on the preceding Index Business Day,  $I_{t-1}$ , and the change in level of each of the Components, according to the formula:

$$I_t = I_{t-1} + \sum_i H_{i,t} (C_{i,t} - C_{i,t-1})$$

Where:

- $I_t$  is the Index Level on the close of Index Business Day  $t$ ;  
 $H_{i,t}$  is the Holding of Component  $i$  on the Index Business Day  $t$ ;  
 $C_{i,t}$  is the level of Component  $i$  on the Index Business Day  $t$ ; and  
 $t-1$  is the Index Business Day immediately preceding Index Business Day  $t$ .

The Total Return Index represents the performance of a synthetic, funded exposure to the Underlying Contracts in an index. That is, the Index tracks what an investor would receive if it purchased or sold the futures contracts ultimately underlying the Index, and simultaneously invested, at a risk-free rate,

a USD sum of money equal to the aggregate notional associated with all bought futures contracts. On an Index Business Day,  $t$ , the Total Return of the Index (the Index level,  $TI_t$ ) is calculated (rounded to the eight decimal places) based on the value of the Total Return of the Index in the preceding Index Business Day,  $TI_{t-1}$ , the Index Daily Return,  $IDR_t$ , and the Collateral Return,  $CR_t$ , according to the formula:

$$TI_t = TI_{t-1} \times (1 + IDR_t + CR_t)$$

$$IDR_t = \frac{I_t}{I_{t-1}} - 1$$

$$CR_t = \left[ \frac{1}{1 - \frac{91}{360} \times TBAR_{t-1}} \right]^{days/91} - 1$$

where:

- $TBAR_{t-1}$  is the Treasury Bill Rate of the most recent weekly US Treasury Bill auction prior to the Index Business Day  $t$ ;
- $days$  is the number of calendar days between the Index Business Day  $t$  and the previous Index Business Days  $t-1$ .

The Index Start Date and the Initial Index Level, which is the value of the Index on the Index Start Date, are specified in Section 4 (*Definitions*).

For example, if the Index were comprised of two components (for simplicity) which had the following Component Levels:

|                          | Component 1 | Component 2 |
|--------------------------|-------------|-------------|
| Index Business Day $t-1$ | 32.48       | 31.49       |
| Index Business Day $t$   | 32.83       | 31.21       |

and the following Holdings:

|             | Holding |
|-------------|---------|
| Component 1 | 1.72    |
| Component 2 | 1.48    |

then if the Index Level on Index Business Day  $t-1$  was equal to 102.0564, the Index Level on Index Business Day  $t$  will be equal to:

$$I_t = 102.0564 + 1.72 \times (32.83 - 32.48) + 1.48 \times (31.21 - 31.49) = 102.244$$

The Excess Return Index Level on Index Business Day  $t$  would be 102.244.

Assuming a US Treasury Bill Rate of 0.92%, and a Total Return Index Level of 100 on the Index Business Day immediately preceding Index Business Day  $t$ , the Total Return Index Level is calculated as follows:

$$CR_t = \left[ \frac{1}{1 - \frac{91}{360} \times 0.92\%} \right]^{\frac{3}{91}} - 1 = 0.0076758897\%$$

$$IDR_t = \frac{102.244}{102.0564} - 1 = 0.183819927021\%$$

The Total Return Index Level on Index Business Day  $t$  would be 100.19149582.

## SECTION 3: MARKET DISRUPTION EVENTS

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### 3.1 UNDERLYING CONTRACTS

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The Index is calculated on a daily basis based on the settlement prices of the futures contracts that underlie the Index (the **Underlying Contracts**, as defined in Section 4 (*Definitions*)). The Underlying Contracts may directly or ultimately underlie the Index, depending on how the Index is constructed. If the Components of the Index are futures or other contracts, then the Underlying Contracts will refer to the Components of the Index. If the Components of the Index are indices, then the Underlying Contracts of the Index will refer to the contracts that underlie those Component indices either directly (where the Component indices are comprised of constituents that are contracts) or ultimately (where the Components are comprised of constituents that are indices, in which case the underlying contracts of those constituent indices will be the Underlying Contracts).

The determination of a Market Disruption Event (as defined below) is made in respect of the Underlying Contracts of the Index.

### 3.2 MARKET DISRUPTION EVENTS

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With respect to the calculation of the Index, a **Market Disruption Event** means the occurrence, in respect of one or more Underlying Contracts, of one or more of the following events, as determined by the Index Calculation Agent:

- (i) a failure by the relevant Trading Facility to report or announce a settlement price for an Underlying Contract;
- (ii) all trading in an Underlying Contract of the Index is suspended and does not recommence at least ten minutes prior to the actual closing time of the regular trading session;
- (iii) the settlement price published by the relevant Trading Facility for one (or more) Underlying Contracts is a “limit price”, which typically means that the Trading Facility published settlement price for such Contract for a trading day has increased or decreased from the previous trading day’s settlement price by the maximum amount permitted under applicable rules of the Trading Facility;
- (iv) any other event, if the Index Administrator reasonably determines that the event materially interferes with the ability of market participants to hedge the Index.

### 3.3 CONSEQUENCES OF A MARKET DISRUPTION EVENT

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If a Market Disruption Event occurs or is continuing in respect of an Underlying Contract (the **Disrupted Contract**) on an Index Business Day (the **Disrupted Day**), the impact of such Market Disruption Event on the calculation of the Index Level on such Disrupted Day will depend on certain factors, including whether the Index is synthetically trading in (i.e. rolling or rebalancing) the Disrupted Contract (in accordance with the Methodology) and the availability of the settlement price of the Disrupted Contract, as described below.

### 3.2.1 Consequences of a Market Disruption Event on a Disrupted Day (no rebalancing)

If a Market Disruption Event occurs (or is continuing) on a Disrupted Day that is not a Disrupted Rebalancing Day (as defined below), then the Index Level will be calculated on such Disrupted Day using the Disruption Price (as defined below) of such Disrupted Contract; provided that, if the Market Disruption Event is continuing on the Market Disruption Longstop Date, then a Market Disruption Adjustment Event shall occur and the Index Calculation Agent may take action in accordance with Section 5 (*Adjustment Events*).

The determination of the Disruption Price of the Disrupted Contract on a Disrupted Day (that is not a Disrupted Rebalancing Day) prior to the Market Disruption Longstop Date, depends on whether or not the settlement price of the Disrupted Contract is available on the Publication Source on such Disrupted Day. The availability of the settlement price of a Disrupted Contract will generally depend on the type of Market Disruption Event; for example, a Market Disruption Event caused by the settlement price of the Disrupted Contract being a “limit price” (available) or a Market Disruption Event caused by the failure of the Trading Facility to publish the settlement price of the Disrupted Contract (unavailable).

The **Disruption Price** is determined as follows: (i) if the settlement price of the Disrupted Contract for such Disrupted Day (the **Disrupted Day Price**) is available from the Publication Source, then (notwithstanding the occurrence of the Market Disruption Event) the Disruption Price will be the Disrupted Day Price; or (ii) if the settlement price of the Disrupted Contract for such Disrupted Day is not available from the Publication Source, then the Disruption Price will be the settlement price of the Disrupted Contract on the Index Business Day prior to such Disrupted Day on which no Market Disruption Event (causing the settlement price to be unavailable) occurred or was continuing (the **Previous Price**).

On the Disrupted Day (that is not a Disrupted Rebalancing Day), the Index Calculation Agent will use the relevant Disruption Price to calculate the Index in place of the price of the Disrupted Contract that would otherwise be used in accordance with the Methodology. By way of further explanation, if the Disrupted Contract is a Component of the Index, then the Disruption Price will be substituted for the Component Level in the Index Level calculation (see Section 2 (*Index Methodology*)) on the Disrupted Day. Similarly, if the Disrupted Contract underlies a Component (or its constituents), then the Disruption Price will be used to calculate the Component Level for the Disrupted Day.

### 3.2.2 Consequences of a Market Disruption Event on a Disrupted Rebalancing Day

If a Market Disruption Event occurs (or is continuing) on an Index Business Day on which the Index is synthetically trading in (i.e. rolling or rebalancing) the Disrupted Contract (a **Disrupted Rebalancing Day**), then the Index will defer the Index action (i.e. the roll or rebalance, as the case may be) relating to the Disrupted Contract (the **Disrupted Action**) until the earlier of (i) the next Rebalancing Day or (ii) the Market Disruption End Date. On the Disrupted Rebalancing Day and on each Disrupted Day on which the relevant Market Disruption Event is continuing until (but excluding) the Market Disruption End Date or the next Rebalancing Day (as applicable) (the **Rebalancing Deferral Period**), the calculation of the Index Level will be modified to reflect such deferral of the Disrupted Action. For the avoidance of doubt, the Index actions relating to the other Underlying Contracts (in respect of which no Market Disruption Event has occurred on such Disrupted Rebalancing Day) will continue to be calculated in accordance with the Methodology during the Rebalancing Deferral Period.

If the Rebalancing Deferral Period ends due to a subsequent Rebalancing Day (a “**New Rebalancing Day**”), then the Disrupted Action in respect of the original Disrupted Rebalancing Day shall not be completed and the roll/rebalancing on the New Rebalancing Day shall be determined in accordance with Section 2.2 (*Holdings Calculation*) and Section 3 (*Market Disruption Events*), where applicable. For the avoidance of doubt, determinations on the New Rebalancing Day shall be made without reference to any Disrupted Action (whether or not completed) that has occurred in respect of any previous Rebalancing Day, and the determination of a Market Disruption Event in respect of an Underlying Contract and any consequences thereof shall be determined in accordance with this Section 3 (*Market Disruption*) without reference to any Market Disruption Event determined in respect of any prior Rebalancing Day.

If the Rebalancing Deferral Period ends on the Market Disruption End Date, then the Disrupted Action will be completed and the calculation of the Index Level will be modified accordingly to reflect the completion of such Disrupted Action; provided that, if the Market Disruption End Date falls on the Market Disruption Longstop Date, then a Market Disruption Adjustment Event shall occur and the Index Calculation Agent may take action in accordance with Section 5 (*Adjustment Events*).

### **3.2.3 Market Disruption Date Definitions**

**Market Disruption Adjustment Event** means the existence of a Market Disruption Event on the Market Disruption Longstop Date.

**Market Disruption End Date** means the earlier of (i) the Index Business Day on which the Market Disruption Event ceases to occur; (ii) the Index Business Day immediately preceding the expiry date of the Disrupted Contract; (iii) Index Business Day immediately preceding the first notice date of the Disrupted Contract (if applicable) and (iv) the Market Disruption Longstop Date.

**Market Disruption Longstop Date** means the date determined by the Index Calculation Agent (subject to approval by the Index Oversight Committee) on which the Market Disruption Event shall be deemed to end for the purpose of determining the Index Level. In determining the Market Disruption Longstop Date, the Index Calculation Agent (and the Index Oversight Committee) may take into account factors including (but not limited to) the objective of the Index, the expiry date of the Disrupted Contract and market practice.

## SECTION 4: DEFINITIONS

**Adjustment Event** is defined in Section 5.1 (*Adjustment Events*).

**Affected Index Level** is defined in Section 6.1.1 (*Errors*).

**Asset Class Specific Adjustment Event** is defined in Section 5.2 (*Asset Class Specific Definitions – Adjustment Events*).

**Calculation Error** is defined in Section 6.1.1 (*Errors*).

**Change in Economic Assumptions** is defined in Section 5.1 (*Adjustment Events*).

**Components** are the following indices specified in the table below with the associated fixed weights:

- **Period 1:** From 30 Jan 2009 to 29 April 2013
- **Period 2:** From 30 April 2013 to 30 October 2013
- **Period 3:** From 31 October 2013 onwards

**TABLE 1**

| Component                         | Index Ticker of Component | Commodity | Sector            | Weight Period 1 | Weight Period 2 | Weight Period 3 |
|-----------------------------------|---------------------------|-----------|-------------------|-----------------|-----------------|-----------------|
| Roll Yield Enhanced WTI           | MQSRCLER                  | CL        | Energy            | 3.37%           | 3.37%           | 3.32%           |
| Roll Yield Enhanced Brent         | MQSRCOER                  | CO        |                   | 5.07%           | 5.07%           | 5.00%           |
| Roll Yield Enhanced Heating Oil   | MQSRHOER                  | HO        |                   | 3.38%           | 3.38%           | 3.33%           |
| Roll Yield Enhanced Gas Oil       | MQSRQSER                  | QS        |                   | 5.07%           | 5.07%           | 5.00%           |
| Roll Yield Enhanced Gasoline      | MQSRXBER                  | XB        |                   | 10.14%          | 10.14%          | 10.00%          |
| Roll Yield Enhanced Natural Gas   | MQSRNGER                  | NG        |                   | 0.81%           | 0.81%           | 0.80%           |
| UK Natural Gas (USD)              | MQSCFNUE                  | FN        |                   | 0.46%           | 0.46%           | 0.45%           |
| TTF Natural Gas (USD)             | MQSCTZTU                  | TZT       |                   | 0.00%           | 0.00%           | 0.45%           |
| Emissions (USD)                   | MQSDMOUE                  | MO        |                   | 5.07%           | 5.07%           | 5.00%           |
| Roll Yield Enhanced LME Copper    | MQSRLPER                  | LP        | Industrial Metals | 11.77%          | 10.00%          | 10.00%          |
| Roll Yield Enhanced LME Zinc      | MQSRLXER                  | LX        |                   | 5.88%           | 5.00%           | 5.00%           |
| Roll Yield Enhanced LME Aluminium | MQSRLAER                  | LA        |                   | 3.92%           | 3.33%           | 3.33%           |
| Roll Yield Enhanced LME Nickel    | MQSRLNER                  | LN        |                   | 7.84%           | 6.66%           | 6.66%           |
| Roll Yield Enhanced LME Lead      | MQSRLLER                  | LL        |                   | 3.92%           | 3.33%           | 3.33%           |
| Iron Ore (monthly rolling)        | MQSCIOER                  | SCO       |                   | 0.00%           | 5.00%           | 5.00%           |
| Roll Yield Enhanced Gold          | MQSRGCER                  | GC        | Precious Metals   | 8.34%           | 8.34%           | 8.34%           |
| Roll Yield Enhanced Silver        | MQSRSIER                  | SI        |                   | 8.33%           | 8.33%           | 8.33%           |
| Platinum                          | MQSDPLER                  | PL        |                   | 8.33%           | 8.33%           | 8.33%           |
| Palladium                         | MQSDPAER                  | PA        |                   | 8.33%           | 8.33%           | 8.33%           |

The calculation and methodology of each Component is set out in a separate Index Manual in each case bearing the name of the respective Component (as amended from time to time) (the **Component Methodology**), available free of charge on request from the Index Administrator or at:

<https://www.macquarie.com/uk/en/about/company/commodities-and-global-markets/commodities/commodity-index-documentation.html> (or any successor page).

**Component Change Event** is defined in Section 5.1 (*Adjustment Events*).

**Component Level**, in respect of an Index Business Day, is the closing level of each Component as determined by the Index Calculation Agent. If the Index Business Day is not a day on which the

Component is scheduled to be published, the Component Level for that day will be the Component Level on the most recent publication day available.

**Component Licensing Event** is defined in Section 5.1 (*Adjustment Events*).

**Component Methodology** is defined in respect of each Component under the definition of “Components” above.

**Contract** is a futures contract traded in a Trading Facility and having a commodity as underlying.

**Change Event** is defined in Section 5.2 (*Asset Class Specific Definitions – Adjustment Events*).

**Dealer** is defined in Section 5.1 (*Adjustment Events*).

**Error** is defined in Section 6.1.1 (*Errors*).

**General Adjustment Event** is defined in Section 5.1 (*Adjustment Events*).

**Holding**, in respect of a Component and an Index Business Day, is a number which is determined by the Index Calculation Agent as described in Section 2.2 (*Holdings Calculation*) of the Index Methodology section. The Holding in respect of a Component is determined in order to calculate the daily Index Level and represents the proportionate effect on the Index Level of a change in the relevant Component Level.

**Holdings Calculation Date** is the last Index Business Day of each calendar month on which ICE EUA Emissions, ICE Endex Dutch TTF Natural Gas and ICE UK Natural Gas are open for trading.

**Index** is defined in the Section headed “Important Information”.

**Index Administrator** is defined in the Section headed “Important Information”.

**Index Business Days** are the days in the Index Calendar.

**Index Calculation Agent** is defined in Section 7.2.2 (*Index Calculation Agent*).

**Index Calendar** is the set of trading days of the New York Mercantile Exchange schedule.

**Index Live Date** 7 Sep 2020.

**Initial Index Level** is 100.

**Index Level** is the level of the Index that is calculated according to Section 2 (*Index Methodology*) of this Methodology.

**Index Manual** is defined in the Section headed “Important Information”.

**Index Oversight Committee** is defined in Section 7.1 (*Index Governance*).

**Index Start Date** is 30 Jan 2009.

**Index Ticker** is Excess Return – **MQCP312E** Index (Bloomberg); Total Return – **MQCP312T** Index (Bloomberg).

**Input Error** is defined in Section 6.1.1 (*Errors*).

**Material Error** is defined in Section 6.1.1 (*Errors*).

**Methodology** is defined in the Section headed “Important Information”.

**Regulatory Event** is defined in Section 5.3 (*Regulatory Event*).



**Replicability Event** is defined in Section 5.1 (*Adjustment Events*).

**Settlement Price**, in respect of a Contract, is the price, expressed in US dollars, published by the relevant Exchange or Trading Facility for such Contract and referred to by such Exchange or Trading Facility as the settlement price for that particular contract. If, in respect of a Contract, any Index Business Day is not a business day of the relevant Exchange or Trading Facility, then the Settlement Price of such Contract will be the most recent available price on the most recent business day of the relevant Exchange or Trading Facility.

**Target Holdings** are a set of multipliers derived from the Weights, which are utilized to rebalance the Components of the Index on each Holdings Calculation Date. Calculation of Target Holdings is described in Section 2.2 (*Holdings Calculation*) of the Index Methodology section.

**Trading Facility** is, in respect of each Contract, each regulated futures exchange, facility or platform on or through which such Contract is traded.

**Underlying Contracts**, in respect of an Index Business Day, are all Contracts which are, directly or indirectly, an underlying of the Index or, if that Index Business Day is a Holdings Calculation Date, scheduled to be an underlying of the Index according to the methodology of that Index or that of its Components.

**Weight**, in respect of each Component, is the Weight used to determine the Holdings of the Index in respect of each Holdings Calculation Date, as specified in Table 1 under the definition of "Components" above.

## SECTION 5: ADJUSTMENT EVENTS AND REGULATORY EVENT

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### 5.1 ADJUSTMENT EVENTS

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If an Adjustment Event occurs, the Index Calculation Agent may, but shall not be obliged to, take one or more of the following steps:

- (i) suspend the publication of the Index Level until such time as the Adjustment Event ceases to occur; or
- (ii) with the approval of the Index Oversight Committee:
  - (a) substitute the Component, if applicable, affected by the Adjustment Event with an asset which has similar characteristics and make such adjustments to the Index as are necessary, if any, in order to account for the substitution;
  - (b) make such adjustments to the Index (including to any of the weights or values of the Components or to the Index Level) and/or alter the methodology of the Index, in order to account for the effect of the Adjustment Event; or
  - (c) if no such adjustment or alteration could be made to preserve the objective of the Index, discontinue the Index.

Where:

**Adjustment Event** means, in respect of a Component, each General Adjustment Event and each Asset Class Specific Adjustment Event (as defined in Section 5.2 (*Asset Class Specific Definitions – Adjustment Events*)) as applicable for such Component.

**Change in Economic Assumptions** means, in respect of a Component, a material change of any economic assumptions (including, but not limited to, assumptions as to liquidity, estimated trading and/or rolling costs of the Components, bid/offer spreads in the market in respect of the Components and the funding cost associated with trading the Components) incorporated into the Methodology for such Component.

**Component Change Event** means, in respect of a Component, that since the Index Live Date, liquidity for the Component on the relevant trading venue has materially decreased in the context of the known or expected financial exposure to the Index.

**Component Licensing Event** means, in respect of a Component or any instrument or security on which the value of a Component depends, and for which a license has been granted to the Index Administrator (or an affiliate of the Index Administrator) in relation to the calculation, hedging or use of the Index, that either (a) such license is revoked, impaired or otherwise disputed for any reason, or (b) there is a material increase in the fee schedule applicable to such license.

**Dealer** means a hypothetical broker dealer subject to the same securities laws and rules and regulations of any securities regulators, exchanges and self-regulating organisations as apply to the Index Administrator.

**General Adjustment Event** means any of the following: a Change in Economic Assumptions, a Component Change Event, a Component Licensing Event and a Replicability Event.

**Replicability Event** means that on or after the Index Live Date, the Index Oversight Committee determines that one or more Dealers would be unable, after using commercially reasonable efforts, to hold, acquire, maintain, short sell or dispose of:

- (i) one or more Components;
- (ii) any instrument or security on which the value of a Component depends; or
- (iii) any instrument or security which is required to replicate the calculation methodology of the Index (including, but not limited to, interest rates and FX rates, if applicable).

## 5.2 ASSET CLASS SPECIFIC DEFINITIONS – ADJUSTMENT EVENTS

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### 5.2.1 Index Components

The following terms are applicable in respect of any Component (which is an index):

**Asset Class Specific Adjustment Event** means the occurrence of any of the following:

- (a) *Component Index Cancellation*: the index administrator of such Index Component permanently cancels the Index Component;
- (b) *Component Index Modification*: the index administrator of such Index Component announces that it will make a material change in the formula for or method of calculating such Index Component (other than a modification prescribed in that formula or method to maintain such Index Component in the event of routine events);
- (c) *Index Succession Event*: such Index Component is (i) not calculated and announced by the relevant index administrator of the Index Component but is calculated and announced by a successor index administrator or (ii) is replaced by a successor index;
- (d) *Underlying Contract Change Event*: in respect of an Underlying Contract of such Component, either: (i) the specifications of an Underlying Contract are materially altered by the relevant trading venue or (ii) an Underlying Contract is permanently no longer traded on the relevant trading venue; or
- (e) *Index Component Adjustment*: an “Adjustment Event” (as defined in the Component Methodology) occurs in respect of such Index Component.

## 5.3 REGULATORY EVENT

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If a Regulatory Event occurs, the Index Administrator may, but shall not be obliged:

- (i) to suspend the publication of the Index Level until such time as the Regulatory Event ceases to occur; or
- (ii) with the approval of the Index Oversight Committee, to discontinue the Index.

**Regulatory Event** means that on or after the Index Live Date (a) due to the adoption of or any change in any applicable regulation, or (b) due to the promulgation of or any change in the interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable regulation, the Index Administrator determines that it is not permitted (or there is a reasonable likelihood that, within the next 30 Index Publication Days, it will not be permitted) to continue to sponsor, administer, maintain or calculate, as applicable, the Index.

## SECTION 6: CORRECTIONS, CHANGES, CESSATION AND DISCRETION

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### 6.1 CORRECTIONS AND ERROR HANDLING

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#### 6.1.1 Errors

Where the Index Administrator or the Index Calculation Agent becomes aware of an Input Error or a Calculation Error (an **Error**), the cause of such error will be investigated and steps taken, to the extent practicable and within the control of the Index Calculation Agent, to prevent such errors from recurring.

If an Error is not corrected by 11.59pm, New York time, on the Index Publication Day following the occurrence of the Error, the Index Calculation Agent shall determine whether such Error affects any published Index Level (such Error, a **Material Error** and each affected Index Level, an **Affected Index Level**).

**Input Error** means any error in input data that is detected by, or notified to, the Index Calculation Agent.

**Calculation Error** means any error in the implementation of the Methodology or arising in the Index calculation and dissemination process that is detected by or notified to the Index Calculation Agent.

#### 6.1.2 Notification of Errors

The Index Calculation Agent shall publish an announcement regarding the occurrence of any Material Error and any change to the Methodology (see Section 6.2 (*Changes in Methodology*)).

#### 6.1.3 Restatement of Index Levels

The Index Calculation Agent will restate any Affected Index Level resulting from a Material Error in the following circumstances:

- (a) in respect of a Material Error that is an Input Error:
  - (i) if the Index Calculation Agent becomes aware of such Input Error within 2 Index Publication Days of publication of the relevant Affected Index Level; or
  - (ii) otherwise, as determined by the Index Oversight Committee.
- (b) In respect of a Material Error that is a Calculation Error:
  - (i) if the Index Calculation Agent becomes aware of such Calculation Error prior within 30 calendar days following the Index Publication Day on which the first Affected Index Level was published; or
  - (ii) otherwise, as determined by the Index Oversight Committee.

## 6.2 CHANGES IN METHODOLOGY

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Various factors, including external factors beyond the control of the Index Administrator, might necessitate material changes to an Index. The Index Manual contains information as of the date appearing on its cover, and such information may change from time to time. No assurance can be given that the Methodology reflects information subsequent to this date.

The Index Administrator may amend the Methodology at any time if the change is (i) of a formal, minor or technical nature, (ii) to correct any manifest or proven error or (iii) where the Index Calculation Agent determines that such change is not materially prejudicial to investors in financial products (in respect of which the Index Administrator has given consent to refer to the Index).

In any other case, a change to the Methodology will be considered to be a material change and may only be made subject to the approval of the Index Oversight Committee. The Index Oversight Committee shall determine the implementation timeline for such change and the timing for notification of such change to investors (which shall generally be at least 30 calendar days prior to implementation, but may be shorter if the Index Oversight Committee so determines), which the Index Administrator will communicate to investors by email.

## 6.3 CESSATION OF INDEX

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The Index Administrator may withdraw the Index, at any time and without notice, if no financial instruments (in respect of which Macquarie Bank Limited has given consent to refer to the Index) are outstanding. The Index Administrator may, in any case (subject to the approval of the Index Oversight Committee), withdraw an Index, without reason, provided that either (i) it notifies all investors in financial instruments (in respect of which Macquarie Bank Limited has given consent to refer to the Index) of its intention to do so by email at least 30 calendar days prior to cessation of calculation and publication of the Index or (ii) all investors in financial instruments (in respect of which Macquarie Bank Limited has given consent to refer to the Index) have agreed to the cessation of the Index and the date of such cessation.

## 6.4 DISCRETION

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In order to ensure continuity, the methodology of this Index permits the exercise of discretion or expert judgement in certain limited circumstances as set out in this Index Manual - see the following sections:

- Section 3 (*Market Disruption*);
- Section 5 (*Adjustment Events and Regulatory Event*); and
- Section 6 (*Corrections, Changes, Cessation and Discretion*).

The Index Calculation Agent or the Index Oversight Committee may also exercise discretion in the administration of the Index if an event or circumstance arises in respect of which there is no fallback provided for in the methodology of this Index and which the Index Calculation Agent or Index Oversight Committee determines prevents the Index Calculation Agent from determining the Index in the normal manner, constitutes a market disruption under the relevant Index Manual or the exercise of expert judgement or discretion is otherwise appropriate in the circumstances.

The Index Calculation Agent or the Index Oversight Committee may exercise any such discretion or expert judgement acting in good faith and in a commercially reasonable manner. Any exercise of discretion or expert judgement that the Index Calculation Agent determines will have a material effect on the Index shall be subject to the approval of the Index Oversight Committee.

## SECTION 7: OVERSIGHT, ROLES, CONFLICTS AND REVIEWS

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### 7.1 INDEX GOVERNANCE

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The Index Administrator has established an independent oversight committee (the **Index Oversight Committee**) to review and oversee management of the Index and resolve any issues that arise. As of the date of this document, the Index Oversight Committee is comprised of the following designees, each an employee of Macquarie Bank Limited:

- A Managing Director in the Quantitative Investment Strategies team of the Commodities and Global Markets division;
- A Director from the Legal and Governance group;
- A representative from the Index Calculation Agent;
- A representative from the Risk division of the Risk Management Group;
- A representative from the Compliance division of the Risk Management Group; and
- A representative from the Business Operational Risk Management department within the Central division of the Commodities and Global Markets group.

Each member of the Index Oversight Committee is sufficiently knowledgeable about algorithmic indices and is required to act in good faith and in a commercially reasonable manner, provided that the Managing Director from the Commodities and Global Markets division will not be a voting member of the Committee, but shall act in an advisory capacity only. In giving approval to any adjustments made to the Index in accordance with this Index Manual, the Index Oversight Committee shall give due consideration to any equivalent decisions and actions taken by relevant trading venues or trade bodies.

The Index Oversight Committee has considered the features of the Index, the intended, expected or known usage of the Index and the materiality of existing or potential conflicts of interest and, taking these into account, has approved the Methodology and this Index Manual. The Index Oversight Committee is also charged with overseeing the daily management and operations of the Index. It will be available on an ad hoc basis for the consideration or approval of any relevant Adjustment Events, Regulatory Events, Errors, exercises of discretion, changes to the Methodology, any contemplated cancellation of the Index and the resolution of any other issues which arise in relation to the Index.

### 7.2 INDEX ADMINISTRATOR AND INDEX CALCULATION AGENT

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#### 7.2.1 Index Administrator

Macquarie Bank Limited is the Index Administrator. Notwithstanding anything to the contrary, the Index Administrator will maintain all ownership rights, expressed or otherwise, with respect to the Index, including the ability to license, sell or transfer any or all of its ownership rights with respect to the Index, including but not limited to terminating and appointing any successor Index Calculation Agent.

### **7.2.2 Index Calculation Agent**

The Index Calculation Agent is appointed by the Index Administrator to calculate and maintain each Index from and until such time that the Index Administrator terminates its relationship with the current Index Calculation Agent and appoints a successor index calculation agent. Any such termination or appointment of a successor will be subject to the approval of the Index Oversight Committee.

The Index Calculation Team within the Commodities and Global Markets division of Macquarie Bank Limited acts as index calculation agent (the **Index Calculation Agent**) in respect of the Index as of the date of this Index Manual. The methodology employed by the Index Calculation Agent in determining the composition and calculation of the Index is set out in the calculations and procedures described in this document.

### **7.2.3 Relationship of the Index Administrator and the Index Calculation Agent**

The Index Calculation Agent is appointed by the Index Administrator, subject to the approval of the Index Oversight Committee. While, as of the date of publication of these rules, both the Index Administrator and the Index Calculation Agent form part of Macquarie Bank Limited, they are independent teams within the bank and the employees discharging the obligations of the Index Calculation Agent have separate lines of reporting and accountability from the employees performing the functions of the Index Administrator.

### **7.2.4 Not acting as a fiduciary**

Neither the Index Administrator nor the Index Calculation Agent owes any duty of care or acts as agent of another person in respect of its respective obligations in relation to the Index as set out in this Index Manual.

## **7.3 CONFLICTS**

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The Index is based on underlying assets, as described in the Methodology. The Index Administrator and/or its affiliates actively trade these underlying assets and options on these underlying assets. The Index Administrator and/or its affiliates also actively enter into or trade and market securities, swaps, options, derivatives, and related instruments which are linked to the performance of these underlying assets or are linked to the performance of the Index. The Index Administrator and/or its affiliates may underwrite or issue other securities or financial instruments indexed to the Index, and the Index Administrator or its affiliates may license the Index for publication or for use by unaffiliated third parties. These activities could present conflicts of interest and could affect the value of the Index. The Index Administrator trades or may trade as principal in instruments (or related derivatives) linked to an index described in this document and may have proprietary positions in the instruments (or related derivatives). The Index Administrator may make a market in such instruments (or related derivatives), which may in extreme circumstances affect the levels of the Index described.

The Index Administrator, the Index Calculation Agent and the business unit which creates instruments linked to the Index are all businesses or entities of Macquarie. Steps have been taken to manage and mitigate the inherent conflicts of interest which result, including the establishment of separate reporting lines for the respective roles, establishment of an independent Index Oversight Committee and the implementation and enforcement of policies and procedures to ensure that appropriate controls are in place.



Certain activities conducted by the Index Administrator may conflict with interests of investors in the Index. Such activities could include (but are not limited to) providing or participating in competing products (such as financial instruments linked to the Index, a Component or a similar index or component) and hedging its exposure to the Index. The Index Administrator could receive substantial returns in respect of such activities, which will not be passed on to any investors in products linked to the Index; whereas the value of investments linked to the Index may decline. Any such activities conducted by the Index Administrator around the time of a rebalancing could adversely impact the performance of the Index and therefore the level of a concurrent rebalancing.

The Index Administrator may have access to information relating to the Index, a Component or investments linked to a Component. The Index Administrator is not obliged to use that information for the benefit of any person entering into products linked to the Index.

#### 7.4 REVIEWS

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The Index Administrator has procedures in place to review a sample of its Indices (which may not include this Index) on an annual basis (or more frequently, if it determines appropriate). Such sample shall include the indices requested by the Index Oversight Committee to be reviewed. The Index Administrator shall submit a report on its reviews to the Index Oversight Committee. If the Index Administrator determines that changes are required to a methodology, the Index Oversight Committee shall review the changes the reasons therefor. Any such changes approved by the Index Oversight Committee shall be implemented in accordance with Section 6.2 (*Changes in Methodology*).

## SECTION 8: GENERAL INFORMATION

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### 8.1 VALUATION AND CALCULATIONS

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The Index Calculation Agent shall, unless stated otherwise, perform all calculations in this Index Manual. It shall perform such calculations in its sole and absolute discretion, acting in good faith and in a commercially reasonable manner. All such calculations shall be subject to the Index Calculation Agent's policies and procedures and will (in the absence of manifest error) be final, conclusive and binding. Neither the Index Calculation Agent nor the Index Administrator shall have any liability for errors or omissions made in good faith.

### 8.2 PUBLICATION OF INDEX LEVEL

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The publication of the Index Level by the Index Calculation Agent for an Index Publication Day follows a publication cycle which ends at the Publication Time for such day. Any Index Level published before the Publication Time in respect of a day is indicative and may be restated up to and including the Publication Time.

In respect of an Index Publication Day, the Index Level as published by the Index Calculation Agent on the Bloomberg Ticker at the Publication Time for such day shall be the official Index Level and shall be final and binding (save for changes made pursuant to Section 6 (*Corrections, Changes, Cessation and Discretion*)). See Section 6.1.2 regarding the publication of Material Errors.

**Publication Time** means, in respect of an Index Publication Day, 23:59:59 (New York Time) on the Index Publication Day immediately following such Index Publication Day.

**Index Publication Day** means each Index Business Day.

### 8.3 HISTORICAL VALUES OF THE INDEX

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Hypothetical back-tested historical values of the Index are not indicative of future performance. The Index Administrator makes no representation as to the accuracy or appropriateness of, and shall have no liability to you or any other entity for any loss or damage, direct or indirect, arising from the use of the historical values.

## SECTION 9: NOTICES AND DISCLAIMERS

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### 9.1 REGULATORY STATUS

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This material is prepared and distributed in the UK by Macquarie Bank Limited, London Branch (MBLLB) and in the EEA member states (other than the UK) by Macquarie Bank International Limited (MBIL) where required. It is intended only for professional clients and eligible counterparties as defined in the rules of the Financial Conduct Authority. MBLLB is registered in England and Wales (Branch No: BR002678, Company No: FC018220, Firm Reference No: 170934). MBIL is incorporated and registered in England and Wales (Company No. 06309906, Firm Reference No. 471080). The registered office for MBLLB and MBIL is Ropemaker Place, 28 Ropemaker Street, London, EC2Y 9HD. MBLLB is authorized and regulated by the Australian Prudential Regulation Authority. Authorised by the Prudential Regulation Authority and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. MBIL is authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

### 9.2 NOT RESEARCH OR AN OFFER

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This document is not a personal recommendation as defined by the Financial Conduct Authority and you should consider whether you can rely upon any opinion or statement contained in this document without seeking further advice tailored for your own circumstances. It is also not investment research, and has not been prepared in accordance with legal requirements designed to promote the independence of such. Any opinions expressed herein may differ from the opinions expressed in other departments including the research department. Nor have the contents of this document been reviewed by any regulatory authority, and the distribution of this document and availability of related financial instruments in certain jurisdictions may be restricted by law.

This document does not constitute a prospectus, offer, invitation or solicitation to buy or sell financial instruments and is not intended to provide the sole basis for any evaluation of the securities or any other financial instruments which may be discussed within, referred to or based upon the Index. Any offering or potential transaction that may be related to the Index will be made separately and subject to distinct documentation and in such case the information contained herein may be superseded in its entirety by such documentation in final form.

### 9.3 THIRD-PARTY DISCLAIMER

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The Index is not endorsed, sponsored or promoted by the issuer or sponsor of any Component of underlying asset of any Component.