Macquarie Diversified Heavy & Ex-Sector Building Block Ex-Petroleum & Livestock Indices

Index Manual
May 2023

IMPORTANT INFORMATION

BASIS OF PROVISION

This document (the **Index Manual**) sets out the rules for the Macquarie Diversified Heavy & Ex-Sector Building Block Ex-Petroleum & Livestock Indices (each an **Index** and together, the **Indices**) and reflects the methodology for determining the composition and calculation of the Indices (the **Methodology**). The Methodology and the Indices 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 Indices. 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

The Indices and any financial instruments based on the Indices 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 Index Manual, 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

See the risk factors relating to Macquarie indices in the document headed "Macquarie Proprietary Indices – Risk Factors" at https://www.macquarie.com/uk/en/about/company/commodities-and-global-markets/commodities/commodity-index-documentation.html (the **Risk Factors**). Investors should note in particular the following sections of the Risk Factors: Part 1 (*General Risk Factors*) and Paragraph 3) (*Commodity Indices*) of 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.

HISTORICAL DATA

The Indices have been calculated from the Index Live Date but historical Index levels (prior to the Index Live Date) have been produced by a back-test process from the Index Start Date. For more information, see Section 9.3 (*Historical Values of the Index*).

CONFLICTS AND USE OF DISCRETION

For operational reasons the Indices 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 7.4 (*Discretion*).

For information on potential conflicts, see Section 8.3 (*Conflicts*).

CESSATION OR MODIFICATION OF THE INDEX

If you have been granted written consent by the Index Administrator to reference the Indices 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 7 (*Corrections, Changes, Cessation and Discretion*).

DISCLAIMER OF LIABILITY

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 Index Manual is intended to provide a summary of the Indices 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 Index Manual and the Methodology or the Indices, 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 any Indices, including as a result of the failure of prices to be published in respect of any Component or, as applicable, any other reference value for any reason. Although the Index Calculation Agent will obtain information concerning Components 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 of the Indices.

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 or the Index Administrator as a result of a determination that a Market Disruption Event, an Adjustment Event or an Error has occurred.

TABLE OF CONTENTS

SECTION 1: OVERVIEW

1.1   INTRODUCTION AND INDEX OBJECTIVE

Each Macquarie Diversified Heavy & Ex-Sector Building Block Ex-Petroleum & Livestock Index takes exposure to a basket of indices (the Components, as more particularly defined in Section 2.1 *(Index Universe)*) that each provide exposure to an underlying commodity and are administered by Macquarie Bank Limited (the **Macquarie Single Commodity Indices**). Each Index is constructed as a basket of Macquarie Single Commodity Indices, selected to provide diversified exposure to commonly traded and highly liquid commodity futures, including Energy, Agriculture, Precious Metals and Industrial Metals. To do so, the Methodology identifies a group of commonly traded and highly liquid commodity futures, sufficient in number to provide diversification benefits to the Indices. These are represented as the "Core" Commodities.

The Indices for which the applicable Index Type is "Heavy" (as specified in Section 5.2 (*Specific Index Parameters*), each represent a diversified exposure, but with a focus on a particular commodity. A target commodity is selected (not necessarily from the list of Core commodities), on which target curve exposure is taken and which receives an increased weighting relative to the other commodities in the Index. Once a percentage exposure (referred to as the Target Weight) has been allocated to the Component that provides exposure target commodity of an Index, the remainder of the Index exposure is spread evenly among the Components providing exposure to all Core commodities (on which Front Month (F0) exposure is taken) that do not belong to the same sector as the target commodity.

The Indices for which the applicable Index Type is "Ex-Sector" (as specified in Section 5.2 (*Specific Index Parameters*), each intend to reflect a diversified exposure to all but one commodity sector. Such Indices will allocate a weight of zero to all commodities contained within a commodity sector, by specification of an Excluded Commodity Sector (in Section 5.2 (*Specific Index Parameters*), in respect of that Index. An example is the Macquarie Diversified Ex-Energy Building Block Index, which is intended to provide a diversified (Front Month (F0)) exposure to all Core commodities except for those in the Energy sector and, accordingly, will allocate a weight of zero to all commodities belonging to the Energy sector.

Each Index is designed to be replicable and is calculated daily in the Index Return format(s) specified in Section 5.1 (*Index Parameters Values*).

To facilitate an understanding of the calculations, the Methodology contains certain worked examples which demonstrate the types of calculations needed to calculate the level of an Index on a particular date – See Section 2 *(Index Methodology)*.

1.2   INDEX CALCULATION

The Indices are calculated and maintained by the Index Calculation Agent and supervised by the Index Administrator and the Index Oversight Committee, as described in Section 8 *(Oversight, Roles, Conflicts and Reviews)*. All determinations with regard to the Indices are made following the rules set out in this Index Manual, without discretion by the Index Administrator or the Index Calculation Agent, other than in the limited circumstances set out in this Index Manual – see Section 7 (*Corrections, Changes, Cessation and Discretion*) for further information.

The Index Level as of the Index Start Date is equal to the Index Start Level specified in Section 5.1 (*Index Parameters Values*). Thereafter, each Index Level is calculated as set out in Section 2 (*Index Methodology*) – See Section 1.3 (*Methodology*) for further explanation.

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

1.3   METHODOLOGY

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

1.4   INDEX PARAMETERS

Each Index is differentiated by the Index Parameters corresponding to that Index. The Index Parameters set out certain parameters specific to an Index (such as the Index Name, the Index Start Date and the Index Currency) and (ii) parameters that determine the calculation of the Weight of the Components in the Index, which depend on the applicable Index Type.

The Index Administrator may, at any time, commence calculation and publication of new Indices pursuant to the Methodology. In such circumstances the Index Administrator will publish a revised version of the Index Manual, revised only to augment Section 5 *(Index Parameters)* with the new Index Parameters relating to the new Indices.

References to an "Index" in this Index Manual shall refer to each of the Indices, as the context requires.

SECTION 2: INDEX METHODOLOGY

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 Section 2.1 (*Index Universe*) 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 to which the Index 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;

- **Section 2.3** describes the day-to-day calculation of the Index Level; and

- **Section 2.4** describes the calculation of the Weights used in the periodic rebalancing of the Index.

2.1 INDEX UNIVERSE

The universe of Components that may comprise the Indices is set out below. The Components are indices administered by Macquarie Bank Limited that either provide exposure to a Front Month commodity futures contract (an **F0 Component**) or a 3 Month Forward futures contract (an **F3 Component**). The terms "Front Month" and "3 Month Forward" are each further defined and described in Section 4 *(Definitions)*.

Each Component is referred to in the following table by its Component Index Bloomberg Ticker (as defined in Section 5.2 *(Specific Index Parameters Values)*).

The determination of which Components are held by an Index on a particular day depends on the Index Type, the Target Curve Exposure (if applicable) and the related weighting strategy, as described in Section 2.4 *(Weight Calculation)*.

Commodity	Sector	F0 Component	F3 Component	Core
Natural Gas	Energy	MQSDNGER	MQSDNG3E	Yes
EUA Emissions	Energy	MQSDMOUE	-	No
Gold	Precious	MQSDGCER	MQSDGC3E	Yes
Silver	Precious	MQSDSIER	MQSDSI3E	Yes
Platinum	Precious	MQSCLPLE	-	No
Palladium	Precious	MQSCLPAE	-	No
Zinc	Industrial	MQSDLXER	MQSDLX3E	Yes
Nickel	Industrial	MQSDLNER	MQSDLN3E	Yes
Aluminium	Industrial	MQSDLAER	MQSDLA3E	Yes
Copper (COMEX)	Industrial	MQSDHGER	MQSDHG3E	Yes

Copper (LME)	Industrial	MQSDLPER	MQSDLP3E	No
Tin	Industrial	MQSCLLTE	-	No
Lead	Industrial	MQSCLLLE	-	Yes
Corn	Grains	MQSDCER	MQSDC3E	Yes
Soybeans	Grains	MQSDSER	MQSDS3E	Yes
Soybean Oil	Grains	MQSDBOER	MQSDBO3E	Yes
Soybean Meal	Grains	MQSDSMER	MQSDSM3E	Yes
Oats	Grains	MQSCLOE	-	No
Rough Rice	Grains	MQSCLRRE	-	No
Wheat (Minneapolis)	Grains	MQSCLMWE	-	No
Wheat (CBOT)	Grains	MQSDWER	MQSDW3E	Yes
Wheat (KCBOT)	Grains	MQSDKWER	MQSDKW3E	Yes
Sugar	Softs	MQSDSBER	MQSDSB3E	Yes
Sugar (White)	Softs	MQSCLQWE	-	No
Coffee	Softs	MQSDKCER	MQSDKC3E	Yes
Coffee (Robusta)	Softs	MQSCLDFE	-	No
Cocoa	Softs	MQSDCCER	MQSDCC3E	No
Orange Juice	Softs	MQSCLJOE	-	No
Cotton	Softs	MQSDCTER	MQSDCT3E	Yes

Each Component is described in the Macquarie Single Commodities Indices Index Manual (the **Component Methodology**), available at https://www.macquarie.com/uk/en/about/company/commodities-and-global-markets/commodities/commodity-index-documentation.html. **Investors must read each Component Methodology.** Each Component Methodology is available free of charge on request from the Index Administrator.

An Index will be specified as **Core** by indicating "Yes" in the right-hand column above where the Underlying Contract of such Index is considered liquid (or, conversely, will not be considered Core by indicating "No" above, where the Index is considered to be illiquid).   The classification of a Commodity as Core may be modified from time to time by the Index Administrator to reflect any material changes in Underlying Contract liquidity or production significance to the world market. If the Index Oversight Committee approves any change to the classification as Core in the table above, a revised Index Manual will be published and revised Target Holdings reflecting the new set of Core Commodities will be applied on the Holdings Calculation Date that falls on or immediately after the date that falls one month after publication.

2.2   HOLDINGS CALCULATION

On each Index Business Day (an **Index Business Day**, t), each Component (a **Component, i**) has a Holding, $H_{i,t}$ (as defined in Section 2.2.2), associated with it, which represents the proportion in which the Index Level will change when the Component Level of that Component, i, changes. The steps to determine the holding of each Component, i, which is based on the Target Holding, $TH_{i,R}$, (as defined in Section 2.2.1), are set out below.

2.2.1   Target Holdings Calculation on a Holdings Calculation Date

In order to determine the Holding ($H_{i,t}$) of a Component, i, on an Index Rebalance Day, t, associated with a Holdings Calculation Date (a **Holdings Calculation Date, R**), the target holding (the **Target Holding, $TH_{i,R}$**), of each Component, i, is calculated according to the following formula:

$$TH_{i,R} = I_d \times \frac{W_{i,R}}{C_{i,d}}$$

Where:

I_d	in respect of an Index Business Day, d, means the Index Level on such Index Business Day, d
$C_{i,d}$	in respect of a Component, i, and an Index Business Day, d, means the Component Level of such Component, i, on such Index Business Day, d
Component Level	in respect of a Component and an Index Business Day, means the Index Level (as defined in the Component Methodology) of such Component on such Index Business Day. If an Index Business Day is not a day on which the Component is scheduled to be published, the Component Level for that Index Business Day will be the most recent available Index Level (as defined in the relevant Component Methodology) of such Component on its most recent publication day.
Index Business Day, d	means, in respect of a Holdings Calculation Date, R, if the Rebalance Type is specified (in Section 5.1 (*Index Parameters Values*)) as: (i) Perfect Weight, such Holdings Calculation Date, R; or (ii) Perfect Hedging, the Index Business Day immediately preceding such Holdings Calculation Date, R (such Index Business Day, **Holdings Calculation Date, $R-1$**)
$W_{i,R}$	in respect of a Component, i, and a Holdings Calculation Date, R, is the Weight defined in Section 2.4 (*Weight Calculation*)

For example, if the Rebalance Type is specified as Perfect Hedging, and if the Index Level, I_{R-1}, on Holdings Calculation Date, $R-1$ is 100, the Component Level, $C_{i,R-1}$, on Holdings Calculation Date, $R-1$ is 80 and the Weight, $W_{i,R}$, of that Component is 40%, then the Target Holding ($TH_{i,R}$) of that Component in respect of that Holdings Calculation Date, R will be equal to 100×(0.4)/80 = 0.5.

2.2.2   Daily Holdings Calculation

On each Index Business Day, t, the holding of each Component, i, (the **Holding**, $H_{i,t}$) is calculated depending on whether such Index Business Day, t, is an Index Rebalance Day (as defined in Section 5.1 (*Index Parameters Values*)), as follows:

(a)   If Index Business Day, t, is an Index Rebalance Day, the kth Index Rebalance Day associated with a Holdings Calculation Date, R, the Holding, $H_{i,t}$, for each Component, i, is calculated according to the following formula:

$$H_{i,t} = H_{i,R-1} + \frac{k}{m} \times \left(TH_{i,R} - H_{i,R-1}\right), \ \ \forall k \in \{1..m\}$$

(b)   If Index Business Day, t, is not an Index Rebalance Day, the Holding, $H_{i,t}$, of each Component, i, is set to be equal to the Holding of such Component, i, on the previous Index Business Day (**Index Business Day,** $t-1$), $H_{i,t-1}$.

Where:

k means, in respect of an Index Business Day, t, that is an Index Rebalance Day and the corresponding Holdings Calculation Date, R, to which such Index Rebalance Day relates, the number of Index Rebalance Days such Index Business Day, t, falls after such Holdings Calculation Date, R. (For example, if the Holdings Calculation Date, R, is an Index Rebalance Day, then $k = 1$, for the subsequent Index Rebalance Day, $k = 2$, etc.)

m means the number of Index Rebalance Days associated with each Holdings Calculation Date, as described in the definition of "Index Rebalance Days" in Section 5.1 (*Index Parameters Values*)

$TH_{i,R}$ means, in respect of a Component, i, and a Holdings Calculation Date, R, the Target Holding of such Component, i, on such Holdings Calculation Date, R (as defined in Section 2.2.1)

$H_{i,R-1}$ means, in respect of a Component, i, and a Holdings Calculation Date, R, the Holding (determined in accordance with this Section) of such Component, i, on Holdings Calculation Date, $R - 1$

2.3   INDEX LEVEL CALCULATION

The 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 level of the Index (the **Index Level**, I_t), is calculated (rounded in accordance with the Index Level Rounding) based on the Index Level on Index Business Day, $t - 1$, I_{t-1}, and the change in the Component Levels of each of the Components, according to the formula:

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

Where:

$H_{i,t-1}$ means, in respect of a Component, i, and an Index Business Day, t, the Holding of such Component, i (as defined in Section 2.2.2 (*Daily Holdings Calculation*)) on Index Business Day, $t-1$

$C_{i,t}$ means, in respect of a Component, i, and an Index Business Day, t, the Component Level of such Component, i, on such Index Business Day, t

$C_{i,t-1}$ means, in respect of a Component, i, and an Index Business Day, t, the Component Level of such Component, i, on Index Business Day, $t-1$

For example, if, on an Index Business Day, t, the Index were comprised of two Components 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

and if the Index Level on Index Business Day, $t-1$, I_{t-1}, was equal to 102.0564, the Index Level on Index Business Day, t, I_t, would be equal to:

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

The Index Level on Index Business Day, t, would be 102.244.

2.4   WEIGHT CALCULATION

The weighting methodology used to determine the weights of the Components of an Index depends on the applicable Index Type. For the purpose of calculating the Target Holdings in respect of a Component, i, (in accordance with Section 2.2.1 *(Target Holdings Calculation on a Holdings Calculation Date)*), the calculation of the Weight, $W_{i,R}$, in respect of a Component, i, on a Holdings Calculation Date, R, is described below.

2.4.1   **Diversified Heavy Building Block Ex-Petroleum & Livestock Indices Weights**

(a)   **Component Sets – Heavy Indices**

The weighting methodology of the Indices in respect of which the Index Type is specified (in Section 5.2 (*Specific Index Parameters*)) as Heavy is designed so that the Index:

(i) takes a targeted (or "heavy") exposure to the Component, i, (the **Target Component**) for which (A) the Commodity (as specified in Section 2.1 *(Index Universe)* is equal to the Target Commodity (as specified in Section 5.2 (*Specific Index Parameters*))*)* and (B) according to the Target Curve Exposure, which is an F0 Component or an F3 Component;

(ii) allocates its remaining weight equally between a set of Components (the **Core Components Set,** $\mathbb{Q}$) comprising the F0 Components corresponding to each Commodity that is (A) not in the Sector (as specified in the table in Section 2.1 *(Index Universe)*) of the Target Commodity and (B) Core (as specified in the table in Section 2.1 *(Index Universe)*); and

(iii) does not take any exposure to the remaining set of Components (the **Excluded Components Set,** $\mathbb{P}$) not in (A) and (B).

(b) **Weight Calculation – Heavy Indices**

In respect of each Index for which the Index Type is specified (in Section 5.2 (*Specific Index Parameters*)) as "Heavy", the weight (or **Weight, $W_{i,R}$**) of each Component, i, on a Holdings Calculation Date, R, is determined as follows:

(i) If such Component, i, is the Target Component, the Weight, $W_{i,R}$, is set to the Target Weight, TW:

$$W_{i,R} = TW$$

(ii) If such Component, i, is in the Core Components Set, $\mathbb{Q}$, the Weight, $W_{i,R}$, is determined in accordance with the following formula:

$$W_{i,R} = \frac{100\% - TW}{|\mathbb{Q}|}$$

Where $|\mathbb{Q}|$ means, the total number of Components from the Core Components Set, $\mathbb{Q}$

(iii) If such Component, i, is in the Excluded Components Set, $\mathbb{P}$, the Weight, $W_{i,R}$, is set to zero (such that the Index does not take exposure to such Component, i):

$$W_{i,R} = 0\%$$

2.4.2 Diversified Ex-Sector Building Block Ex-Petroleum & Livestock Indices Weights

(a) **Component Sets – Ex-Sector Indices**

The weighting methodology of the Indices in respect of which the Index Type is specified (in Section 5.2 (*Specific Index Parameters*)) as "Ex-Sector" is designed so that the Index:

(i) takes equally-weighted exposure to a set of Components (the **Core Components Set,** $\mathbb{Q}$)) comprising each F0 Component that corresponds to a Commodity (A) relating to a Sector (as specified in Section 2.1 *(Index Universe)*) that is not the Excluded Sector (as specified in Section 5.2 (*Specific Index Parameters*)) of such Index (each, an **Included Sector**) and (B) that is Core; and

(ii)   excludes a set of Components (the **Excluded Components Set,** $\mathbb{P}$) comprising all Components not in (A) and (B).

(b)   **Weight Calculation – Ex-Sector Indices**

In respect of each Index for which the Index Type is specified (in Section 5.2 (*Specific Index Parameters*)) as "Ex-Sector", the weight (or **Weight, $W_{i,R}$**) of each Component, i, is determined as follows:

(i)   If such Component, i, is in the Core Components Set, $\mathbb{Q}$, the Weight, $W_{i,R}$, is calculated in accordance with the following formula:

$$W_{i,R} = \frac{100\%}{|\mathbb{Q}|}$$

Where $|\mathbb{Q}|$ means, the total number of Components from the Core Components Set, $\mathbb{Q}$.

(ii)   If such Component, i, is in the Excluded Components Set, $\mathbb{P}$, the Weight, $W_{i,R}$, is set to zero (such that the Index does not take exposure to such Component, i):

$$W_{i,R} = 0\%$$

SECTION 3: MARKET DISRUPTION

3.1   UNDERLYING CONTRACTS

The Index is calculated on a daily basis based on the settlement prices of the contracts that underlie the Index (the **Underlying Contracts**). The Underlying Contracts may directly or ultimately underlie the Index, depending on how the Index is constructed. If the Component of the Index is a futures or other contract, then the Underlying Contracts will refer to the Component of the Index. If the Component of the Index is an index, then the Underlying Contracts of the Index will refer to the contracts that underlie the Component index either directly (where the Component index is comprised of constituents that are contracts) or ultimately (where the Component is 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

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 Venue to report or announce a settlement price for an Underlying Contract (including each Index Business Day where the Trading Venue is not open for business);

(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 Venue for one (or more) Underlying Contracts is a "limit price", which typically means that the Trading Venue 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 Venue;

(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;

(v)   if Option Linked Contract Disruption is applicable (as specified in Section 5.1 *(Index Parameters Values)*) and if such Underlying Contract that is an option contract, the occurrence of a Market Disruption Event (as defined in sub-paragraphs (i) to (iv) (inclusive), above) in respect of the corresponding futures contract (such futures contract, an **Option Linked Contract**); or

(vi)   if Commodity Linked Contract Disruption is applicable (as specified in Section 5.1 *(Index Parameters Values)*), the occurrence of a Market Disruption Event (as defined in sub-paragraphs (i) to (iv) (inclusive), above) in respect of an Underlying Contract that shares the same Commodity (such futures contract, a **Commodity Linked Contract**).

For the avoidance of doubt, the occurrence of an Option Linked Contract Disruption or a Commodity Linked Contract Disruption in accordance with sub-paragraphs (v) or (vi) (as the case may be) above shall be deemed to occur in respect of an Underlying Contract regardless of whether or not any other Market Disruption Event (in accordance with sub-paragraphs (i) to (iv) (inclusive), above) has occurred in respect of such Underlying Contract.

3.3   CONSEQUENCES OF A MARKET DISRUPTION EVENT

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.

3.3.1   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 6.1 *(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" or by a disruption of a Linked Contract (available) or a Market Disruption Event caused by the failure of the Trading Venue 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 end of day settlement price of such Disrupted Contract in the Index Level calculation (see Section 2.2.2 *(Index Level Calculation)*) 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 end of day settlement price in respect of such Component for the Disrupted Day.

3.3.2   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) 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 and which are not Linked Contracts (if applicable) 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 rebalancing on the New Rebalancing Day shall be determined in accordance with Section 2 *(Index Methodology)* (and this Section 3 *(Market Disruption)*, 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 is 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 6.1 *(Adjustment Events)*.

3.3.3   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) the 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.

Rebalancing Day means each day on which the Index is synthetically trading.

SECTION 4: DEFINITIONS

3 Month Forward, in respect of a Component, means is the curve exposure associated with an F3 Component, for which the roll schedule in respect of each Underlying Contract is defined in the Component Methodology. For additional clarity, this represents a version of the Front Month that is offset by three months such that it references the contract that the Front Month would take exposure to in three months' time, representing medium term exposure.

Adjustment Event is defined in Section 6.1 *(Adjustment Events)*.

Affected Index Level is defined in Section 7.1 *(Corrections and Error Handling)*.

Asset Class Specific Adjustment Event is defined in Section 6.2 *(Asset Class Specific Definitions – Adjustment Events)*.

Bloomberg Ticker, in respect of an Index, is defined in Section 5.1 *(Index Parameters Values)*.

Calculation Error is defined in Section 7.1 *(Corrections and Error Handling)*.

Change in Economic Assumptions is defined in Section 6.1 *(Adjustment Events)*.

Commodity Linked Contract is defined in Section 3.2 *(Market Disruption Events)*.

Commodity Linked Contract Disruption is specified as applicable or not applicable in respect of an Index in Section 5.1 *(Index Parameters Values)*.

Component is defined in Section 2.1 *(Index Universe)*.

Component, i is defined in Section 2.2 *(Holdings Calculation)*.

Component Change Event is defined in Section 6.1 *(Adjustment Events)*.

Component Index Bloomberg Ticker, in respect of a Component, is defined in Section 5.2 (*Specific Index Parameters*).

Component Level is defined in Section 2.2.1 *(Target Holdings Calculation on a Holdings Calculation Date)*.

Component Licensing Event is defined in Section 6.1 *(Adjustment Events)*.

Component Methodology, in respect of each Component, is defined in Section 2.1 *(Index Universe)*.

Core, in respect of a Commodity, is defined in the table in Section 2.1 *(Index Universe)*.

Core Components Set, $\mathbb{Q}$ is defined in Section 2.4 (*Weight Calculation*).

Dealer is defined in Section 6.1 *(Adjustment Events)*.

Disrupted Action is defined in Section 3.3.2 *(Consequences of a Market Disruption Event on a Disrupted Rebalancing Day)*.

Disrupted Contract is defined in Section 3.3 (*Consequences of a Market Disruption Event*).

Disrupted Day is defined in Section 3.3 (*Consequences of a Market Disruption Event*).

Disrupted Day Price is defined in Section 3.3.1 (*Consequences of a Market Disruption Event on a Disrupted Day (no rebalancing)*).

Disrupted Rebalancing Day is defined in Section 3.3.2 *(Consequences of a Market Disruption Event on a Disrupted Rebalancing Day)*.

Disruption Price is defined in Section 3.3.1 (*Consequences of a Market Disruption Event on a Disrupted Day (no rebalancing))*.

Error is defined in Section 7.1 *(Corrections and Error Handling)*.

Excluded Components Set, $\mathbb{P}$ is defined in Section 2.4 (*Weight Calculation*).

Excluded Sector is defined, in respect of each Index for which the applicable Index Type is "Ex-Sector", in Section 5.2 (*Specific Index Parameters)*.

F0 Component is defined in Section 2.1 *(Index Universe)*.

F3 Component is defined in Section 2.1 *(Index Universe)*.

Front Month, in respect of a Component, means the curve exposure associated with an F0 Component, for which the roll schedule in respect of each Underlying Contract is defined in the Component Methodology. For additional clarity, this represents the exposure taken with respect to the front end of the commodity futures curve, typically where the expiration of the relevant contract is in the immediate near term.

General Adjustment Event is defined in Section 6 1 *(Adjustment Events)*.

Holding, in respect of a Component, is defined in Section 2.2.2 *(Daily Holdings Calculation)*.

Holdings Calculation Date is defined in Section 5.1 *(Index Parameters Values)*.

Holdings Calculation Date, R is defined in Section 2.2.1 *(Target Holdings Calculation on a Holdings Calculation Date)*.

Holdings Calculation Date, $R-1$ is defined in Section 2.2.1 *(Target Holdings Calculation on a Holdings Calculation Date)*.

Included Sector is defined in Section 2.4 (*Weight Calculation*).

Index is defined in the section entitled "Important Information".

Index Administrator is defined in the section entitled "Important Information".

Index Business Day is defined in Section 5.1 *(Index Parameters Values)*.

Index Business Day, d is defined in Section 2.2.1 *(Target Holdings Calculation on a Holdings Calculation Date)*.

Index Business Day, $d-1$ is defined in Section 2.2.2 *(Daily Holdings Calculation)*.

Index Business Day, t is defined in Section 2.2 *(Holdings Calculation)*.

Index Calculation Agent is defined in Section 8.2.2 *(Index Calculation Agent)*.

Index Currency is defined in Section 5.1 *(Index Parameters Values)*.

Index Level is defined in Section 2.3 *(Index Level Calculation)*, being each level of the Index as calculated and published by the Index Calculation Agent.

Index Level Rounding is defined in Section 5.1 *(Index Parameters Values)*.

Index Live Date is defined in Section 5.1 *(Index Parameters Values)* and is the date on which the Methodology of the Index was finalized.

Index Manual is defined in the section entitled "Important Information".

Index Name, in respect of an Index, is defined in Section 5.1 *(Index Parameters Values)*.

Index Oversight Committee is defined in Section 8.1 *(Oversight, Roles, Conflicts and Reviews)*.

Index Publication Day is defined in Section 5.1 *(Index Parameters Values)*.

Index Rebalance Calendar is defined in Section 5.1 *(Index Parameters Values)*.

Index Rebalance Day is defined in Section 5.1 (*Index Parameters Values*).

Index Return, in respect of an Index, is defined in Section 5.1 *(Index Parameters Values)*.

Index Start Date is defined in Section 5.1 *(Index Parameters Values)*, being the first day in respect of which an Index Level is published (such level being the Initial Index Level).

Index Start Level is defined in Section 5.1 *(Index Parameters Values)*.

Index Type is defined, in respect of an Index, in Section 5.2 (*Specific Index Parameters*).

Initial Calculation Date means the date on which the Index Calculation Agent first implemented the Index and published the Index Level. The Initial Calculation Date may fall on or after the Index Live Date.

Input Error is defined in Section 7.1 *(Corrections and Error Handling)*.

Macquarie Index Component is defined in Section 6.2 *(Asset Class Specific Definitions – Adjustment Events)*.

Macquarie Single Commodity Indices is defined in Section 1.1 *(Introduction and Index Objective)*.

Market Disruption Adjustment Event is defined in Section 3.3.3 *(Market Disruption Date Definitions)*.

Market Disruption End Date is defined in Section 3.3.3 *(Market Disruption Date Definitions)*.

Market Disruption Event is defined in Section 3.2 *(Market Disruption Events)*.

Market Disruption Longstop Date is defined in Section 3.3.3 *(Market Disruption Date Definitions)*.

Material Error is defined in Section 7.1 *(Corrections and Error Handling)*.

Methodology is defined in the section entitled "Important Information".

New Rebalancing Day is defined in Section 3.3.2 *(Consequences of a Market Disruption Event on a Disrupted Rebalancing Day)*.

Option Linked Contract is defined in Section 3.2 *(Market Disruption Events)*.

Option Linked Contract Disruption is specified as applicable or not applicable in respect of an Index in Section 5.1 *(Index Parameters Values)*.

Previous Price is defined in Section 3.3.1 (*Consequences of a Market Disruption Event on a Disrupted Day (no rebalancing))*.

Publication Time is defined in Section 9.2 *(Publication of Index Level)*.

Rebalance Type is defined in Section 5.1 *(Index Parameters Values)*.

Rebalancing Day is defined in Section 3.3.3 (*Market Disruption Date Definitions*).

Rebalancing Deferral Period is defined in Section 3.3.2 *(Consequences of a Market Disruption Event on a Disrupted Rebalancing Day)*.

Regulatory Event is defined in Section 6.3 (*Regulatory Event*).

Replicability Event is defined in Section 6.1 *(Adjustment Events)*.

Risk Factors is defined in the section entitled "Important Information".

Sector, in respect of a Commodity, is defined in Section 2.1 *(Index Universe)*.

Target Holding is defined in Section 2.1.1 *(Target Holdings Calculation on a Holdings Calculation Date)*.

Target Commodity, in respect of each Index for which the Index Type is specified as Heavy, is defined in Section 5.2 (*Specific Index Parameters*).

Target Component, in respect of each Index for which the Index Type is specified as Heavy, is defined in Section 2.4 (*Weight Calculation*).

Target Curve Exposure, in respect of each Index for which the Index Type is specified as Heavy, is defined in Section 5.2 *(Specific Index Parameters)* and is either Front Month (F0) or 3 Month Forward (F3).

Target Weight, in respect of each Index for which the Index Type is specified as Heavy, is defined in Section 5.2 (*Specific Index Parameters*).

Trading Day means, in respect of an Underlying Contract, a day on which the Trading Venue of such Underlying Contract, is scheduled to be open for trading.

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

Underlying Contracts is defined in Section 3.1 *(Underlying Contracts)*.

Weight, in respect of a Component, is defined in Section 2.4 (*Weight Calculation*).

SECTION 5: INDEX PARAMETERS

5.1   INDEX PARAMETERS VALUES

The Index Parameters to be used in this Methodology are as follows:

Index Parameters	Definition
Index Name	As specified in Section 5.2 *(Specific Index Parameters)*
Index Return	Excess Return (ER)
Index Business Day	Each scheduled trading day of the New York Mercantile Exchange
Index Publication Day	Each Index Business Day
Index Currency	USD
Index Live Date	28 April 2023
Index Start Date	14 January 2013
Index Start Level	100
Index Level Rounding	8 decimal places
Index Rebalance Calendar	Each Index Business Day
Index Rebalance Day	The first Index Business Day starting on each Holdings Calculation Date that is included in the Index Rebalance Calendar.
Bloomberg Ticker	As specified in Section 5.2 (*Specific Index Parameters*)
Holdings Calculation Date	The 9th Index Business Day of each calendar month provided that such date is a Trading Day for EUA Emissions Underlying Contracts. If the 9th Index Business Day of the calendar month is not a Trading Day for EUA Emissions Underlying Contracts, then the Holdings Calculation Date shall be the immediately following Index Business Day which is also a Trading Day for EUA Emissions Underlying Contracts.
Rebalance Type	Perfect Hedging
Commodity Linked Contract Disruption	Applicable
Option Linked Contract Disruption	Not applicable

5.2 SPECIFIC INDEX PARAMETERS

The Specific Index Parameters to be used in this Methodology are as follows:

5.2.1 Diversified Heavy F0 Building Block Ex-Petroleum & Livestock Indices

Index Name	Target Commodity	Target Curve Exposure	Index Type	Component Index Bloomberg Ticker	Target Weight
Macquarie Diversified Heavy F0 EUA Emissions Ex-Petroleum & Livestock Building Block Index	EUA Emissions	F0	Heavy	MQCPMO0I	30%
Macquarie Diversified Heavy F0 Natural Gas Ex-Petroleum & Livestock Building Block Index	Natural Gas	F0	Heavy	MQCPNG0I	30%
Macquarie Diversified Heavy F0 Gold Ex-Petroleum & Livestock Building Block Index	Gold	F0	Heavy	MQCPGC0I	30%
Macquarie Diversified Heavy F0 Silver Ex-Petroleum & Livestock Building Block Index	Silver	F0	Heavy	MQCPSI0I	30%
Macquarie Diversified Heavy F0 Platinum Ex-Petroleum & Livestock Building Block Index	Platinum	F0	Heavy	MQCPPL0I	30%
Macquarie Diversified Heavy F0 Palladium Ex-Petroleum & Livestock Building Block Index	Palladium	F0	Heavy	MQCPPA0I	30%
Macquarie Diversified Heavy F0 Zinc Ex-Petroleum & Livestock Building Block Index	Zinc	F0	Heavy	MQCPLX0I	30%
Macquarie Diversified Heavy F0 Nickel Ex-Petroleum & Livestock Building Block Index	Nickel	F0	Heavy	MQCPLN0I	30%
Macquarie Diversified Heavy F0 Aluminium Ex-Petroleum & Livestock Building Block Index	Aluminium	F0	Heavy	MQCPLA0I	30%
Macquarie Diversified Heavy F0 Copper (COMEX) Ex-Petroleum & Livestock Building Block Index	Copper (COMEX)	F0	Heavy	MQCPHG0I	30%
Macquarie Diversified Heavy F0 Copper (LME)Ex-Petroleum & Livestock Building Block Index	Copper (LME)	F0	Heavy	MQCPLP0I	30%
Macquarie Diversified Heavy F0 Tin Ex-Petroleum & Livestock Building Block Index	Tin	F0	Heavy	MQCPLT0I	30%
Macquarie Diversified Heavy F0 Lead Ex-Petroleum & Livestock Building Block Index	Lead	F0	Heavy	MQCPLL0I	30%
Macquarie Diversified Heavy F0 Corn Ex-Petroleum & Livestock Building Block Index	Corn	F0	Heavy	MQCPCX0I	30%
Macquarie Diversified Heavy F0 Soybeans Ex-Petroleum & Livestock Building Block Index	Soybeans	F0	Heavy	MQCPSX0I	30%
Macquarie Diversified Heavy F0 Soybean Oil Ex-Petroleum & Livestock Building Block Index	Soybean Oil	F0	Heavy	MQCPBO0I	30%
Macquarie Diversified Heavy F0 Soybean Meal Ex-Petroleum & Livestock Building Block Index	Soybean Meal	F0	Heavy	MQCPSM0I	30%
Macquarie Diversified Heavy F0 Oats Ex-Petroleum & Livestock Building Block Index	Oats	F0	Heavy	MQCPOX0I	30%
Macquarie Diversified Heavy F0 Rough Rice Ex-Petroleum & Livestock Building Block Index	Rough Rice	F0	Heavy	MQCPRR0I	30%

Index Name	Target Commodity	Target Curve Exposure	Index Type	Component Index Bloomberg Ticker	Target Weight
Macquarie Diversified Heavy F0 Wheat (Minneapolis) Ex-Petroleum & Livestock Building Block Index	Wheat (Minneapolis)	F0	Heavy	MQCPMW0I	30%
Macquarie Diversified Heavy F0 Wheat (CBOT) Ex-Petroleum & Livestock Building Block Index	Wheat (CBOT)	F0	Heavy	MQCPWX0I	30%
Macquarie Diversified Heavy F0 Wheat (KCBOT) Ex-Petroleum & Livestock Building Block Index	Wheat (KCBOT)	F0	Heavy	MQCPKW0I	30%
Macquarie Diversified Heavy F0 Sugar Ex-Petroleum & Livestock Building Block Index	Sugar	F0	Heavy	MQCPSB0I	30%
Macquarie Diversified Heavy F0 Sugar (White) Ex-Petroleum & Livestock Building Block Index	Sugar (White)	F0	Heavy	MQCPQW0I	30%
Macquarie Diversified Heavy F0 Coffee Ex-Petroleum & Livestock Building Block Index	Coffee	F0	Heavy	MQCPKC0I	30%
Macquarie Diversified Heavy F0 Coffee (Robusta) Ex-Petroleum & Livestock Building Block Index	Coffee (Robusta)	F0	Heavy	MQCPDF0I	30%
Macquarie Diversified Heavy F0 Cocoa Ex-Petroleum & Livestock Building Block Index	Cocoa	F0	Heavy	MQCPCC0I	30%
Macquarie Diversified Heavy F0 Orange Juice Ex-Petroleum & Livestock Building Block Index	Orange Juice	F0	Heavy	MQCPJO0I	30%
Macquarie Diversified Heavy F0 Cotton Ex-Petroleum & Livestock Building Block Index	Cotton	F0	Heavy	MQCPCT0I	30%

5.2.2   Diversified Heavy F3 Building Block Ex-Petroleum & Livestock Indices

Index Name	Target Commodity	Target Curve Exposure	Index Type	Component Index Bloomberg Ticker	Target Weight
Macquarie Diversified Heavy F3 Natural Gas Ex-Petroleum & Livestock Building Block Index	Natural Gas	F3	Heavy	MQCPNG3I	30%
Macquarie Diversified Heavy F3 Gold Ex-Petroleum & Livestock Building Block Index	Gold	F3	Heavy	MQCPGC3I	30%
Macquarie Diversified Heavy F3 Silver Ex-Petroleum & Livestock Building Block Index	Silver	F3	Heavy	MQCPSI3I	30%
Macquarie Diversified Heavy F3 Zinc Ex-Petroleum & Livestock Building Block Index	Zinc	F3	Heavy	MQCPLX3I	30%
Macquarie Diversified Heavy F3 Nickel Ex-Petroleum & Livestock Building Block Index	Nickel	F3	Heavy	MQCPLN3I	30%
Macquarie Diversified Heavy F3 Aluminium Ex-Petroleum & Livestock Building Block Index	Aluminium	F3	Heavy	MQCPLA3I	30%
Macquarie Diversified Heavy F3 Copper (COMEX) Ex-Petroleum & Livestock Building Block Index	Copper (COMEX)	F3	Heavy	MQCPHG3I	30%
Macquarie Diversified Heavy F3 Copper (LME) Ex-Petroleum & Livestock Building Block Index	Copper (LME)	F3	Heavy	MQCPLP3I	30%

Index Name	Target Commodity	Target Curve Exposure	Index Type	Component Index Bloomberg Ticker	Target Weight
Macquarie Diversified Heavy F3 Corn Ex-Petroleum & Livestock Building Block Index	Corn	F3	Heavy	MQCPCX3I	30%
Macquarie Diversified Heavy F3 Soybeans Ex-Petroleum & Livestock Building Block Index	Soybeans	F3	Heavy	MQCPSX3I	30%
Macquarie Diversified Heavy F3 Soybean Oil Ex-Petroleum & Livestock Building Block Index	Soybean Oil	F3	Heavy	MQCPBO3I	30%
Macquarie Diversified Heavy F3 Soybean Meal Ex-Petroleum & Livestock Building Block Index	Soybean Meal	F3	Heavy	MQCPSM3I	30%
Macquarie Diversified Heavy F3 Wheat (CBOT) Ex-Petroleum & Livestock Building Block Index	Wheat (CBOT)	F3	Heavy	MQCPWX3I	30%
Macquarie Diversified Heavy F3 Wheat (KCBOT) Ex-Petroleum & Livestock Building Block Index	Wheat (KCBOT)	F3	Heavy	MQCPKW3I	30%
Macquarie Diversified Heavy F3 Sugar Ex-Petroleum & Livestock Building Block Index	Sugar	F3	Heavy	MQCPSB3I	30%
Macquarie Diversified Heavy F3 Coffee Meal Ex-Petroleum & Livestock Building Block Index	Coffee	F3	Heavy	MQCPKC3I	30%
Macquarie Diversified Heavy F3 Cocoa Ex-Petroleum & Livestock Building Block Index	Cocoa	F3	Heavy	MQCPCC3I	30%
Macquarie Diversified Heavy F3 Cotton Ex-Petroleum & Livestock Building Block Index	Cotton	F3	Heavy	MQCPCT3I	30%

5.2.3   Diversified Ex-Sector Building Block Ex-Petroleum & Livestock Indices

Index Name	Excluded Sector	Target Curve Exposure	Index Type	Component Index Bloomberg Ticker
Macquarie Diversified Ex-Energy, Ex-Petroleum & Livestock Building Block Index	Energy	F0	Ex-Sector	MQCPEN0Y
Macquarie Diversified Ex-Precious, Ex-Petroleum & Livestock Building Block Index	Precious	F0	Ex-Sector	MQCPPM0Y
Macquarie Diversified Ex-Industrial, Ex-Petroleum & Livestock Building Block Index	Industrial	F0	Ex-Sector	MQCPBM0Y
Macquarie Diversified Ex-Grains, Ex-Petroleum & Livestock Building Block Index	Grains	F0	Ex-Sector	MQCPGN0Y
Macquarie Diversified Ex-Softs, Ex-Petroleum & Livestock Building Block Index	Softs	F0	Ex-Sector	MQCPST0Y

SECTION 6: ADJUSTMENT EVENTS AND REGULATORY EVENT

6.1   ADJUSTMENT EVENTS

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 6.*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, a Market Disruption Adjustment 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).

6.2   ASSET CLASS SPECIFIC DEFINITIONS – ADJUSTMENT EVENTS

6.2.1   Macquarie Index Components

The following term is applicable in respect of any Component that is an index administered by Macquarie Bank Limited (a **Macquarie Index Component**).

Asset Specific Adjustment Event means the occurrence of the following:

(a)   *Index Component Cancellation:* the index administrator of such Macquarie Index Component permanently cancels the Macquarie Index Component;

(b)   *Index Component Modification:* the index administrator of such Macquarie Index Component announces that it will make a material change in the formula for or method of calculating such Macquarie Index Component (other than a modification prescribed in that formula or method to maintain such Macquarie Index Component in the event of routine events); or

(c)   *Index Succession Event:* such Macquarie Index Component is (i) not calculated and announced by the relevant index administrator of the Macquarie Index Component but is calculated and announced by a successor index administrator or (ii) is replaced by a successor index; or

(d)   *Underlying Contract Change Event:* in respect of an Underlying Contract of such Macquarie Index 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" or a "BCOM Adjustment Event" (if applicable) (each, as defined in the Component Methodology) occurs in respect of such Macquarie Index Component.

6.3   REGULATORY EVENT

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 7: CORRECTIONS, CHANGES, CESSATION AND DISCRETION

7.1 CORRECTIONS AND ERROR HANDLING

7.1.1 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**).

Where:

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.

7.1.2 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 7.2 *(Changes in Methodology)*).

7.1.3 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.

7.2   CHANGES IN METHODOLOGY

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.

7.3   CESSATION OF INDEX

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.

7.4   DISCRETION

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 2.1 *(Index Universe)*, in respect of the classification of Commodities as Core;
- Section 3 *(Market Disruption)*;
- Section 6 *(Adjustment Events and Regulatory Event)*; and
- Section 7 *(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 8: OVERSIGHT, ROLES, CONFLICTS AND REVIEWS

8.1   INDEX GOVERNANCE

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 Index Manual, 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 Group;

- 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 Group 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.

8.2   INDEX ADMINISTRATOR AND INDEX CALCULATION AGENT

8.2.1   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.

8.2.2   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 Group 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 Index Manual.

8.2.3   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.

8.2.4   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.

8.3   CONFLICTS

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 Index Manual 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.

8.4   REVIEWS

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 and the reasons for such changes. Any such changes approved by the Index Oversight Committee shall be implemented in accordance with Section 7.2 *(Changes in Methodology)*.

SECTION 9: GENERAL INFORMATION

9.1   VALUATION AND CALCULATIONS

The Index Calculation Agent shall, unless stated otherwise, perform all calculations in this Index Manual from the Initial Calculation Date. 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.

9.2   PUBLICATION OF INDEX LEVEL

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 7 *(Corrections, Changes, Cessation and Discretion)*). See Section 7.1.2 regarding the publication of Material Errors.

Where:

> **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** is defined in Section 5.1 *(Index Parameters Values)*.

9.3   HISTORICAL VALUES OF THE INDEX

Hypothetical back-tested historical levels of the Index prior to the Index Live Date 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. Any hypothetical back-tested historical levels of the Index prior to the Index Start Date (where available) are provided for illustrative purposes only, may be calculated based on a methodology and a set of assumptions that differs from the Methodology of the Index set out in this Index Manual and may use different input data; accordingly, such historical levels must not be relied upon.

SECTION 10: NOTICES AND DISCLAIMERS

10.1   REGULATORY STATUS

This material is prepared and distributed in the UK by Macquarie Bank Limited, London Branch (MBLLB) and in the EEA member states by Macquarie Bank Europe (DAC) (MBE) 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). MBE is registered and incorporated in the Republic of Ireland (Company No. 634817). The registered office for MBLLB is Ropemaker Place, 28 Ropemaker Street, London, EC2Y 9HD. The registered office of MBE is First Floor, Connaught House, 1 Burlington Road, Dublin 4, D04 C5Y6, Ireland. MBLLB is authorised and regulated by the Australian Prudential Regulation Authority. MBE is authorised and regulated by the Central Bank of Ireland. Details about the extent of our regulation are available from us on request.

10.2   NOT RESEARCH OR AN OFFER

This Index Manual 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 Index Manual 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 Index Manual been reviewed by any regulatory authority, and the distribution of this Index Manual and availability of related financial instruments in certain jurisdictions may be restricted by law.

This Index Manual 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.

10.3   THIRD-PARTY DISCLAIMER

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