Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped 4x Levered Index

Index Manual
October 2018

NOTICES AND DISCLAIMERS

BASIS OF PROVISION

This Index Manual sets out the rules for the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped 4x Levered 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 Sponsor**). They have been provided to you solely for your internal use and you may not, without the prior written consent of the Index Sponsor, distribute, reproduce, in whole or in part, summarise, quote from or otherwise publicly refer to the contents of the Methodology or use it as the basis of any financial instrument.

DATE OF INDEX MANUAL AND CHANGES TO THE INDICES

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 Sponsor may, however, supplement, amend or withdraw the Methodology at any time if it determines that the Index is no longer calculable under the existing Methodology. The Index Sponsor may also determine that a change to the Methodology is required or desirable to address an error, ambiguity or omission. Such changes may include changes to eligibility requirements or construction as well as changes to the daily Index calculations. If a supplement or amendment is required and such supplement or amendment materially affects the Index Level of the Index, the Index Sponsor will publish such changes to the Methodology, together with the rationale for such changes, 30 days prior to implementation. However if prior publication of the changes is not practicable, the changes and rationale will be published as soon as is reasonably practicable.

The Index Sponsor may withdraw the Index, at any time and without notice, if no financial instruments (in respect of which it has given consent to refer to the Index) are outstanding. The Index Sponsor may, in any case, withdraw the Index, without reason, provided it publishes its intention to do so at least six months prior to cessation of calculation and publication of Index levels.

If you have been granted written consent by the Index Sponsor to reference the Index in any contract or financial instrument, you should include in such contract or financial instruments robust fall-back provisions to deal with cessation or material modification of the 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 made 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.

HISTORICAL VALUES OF THE INDEX

Hypothetical back-tested historical values of the Index are not indicative of future performance. The Index Sponsor 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.

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 Sponsor, Index Calculation Agent and/or their affiliates. This document is intended to provide a summary of the Index it purports to describe. The Index Sponsor 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 Sponsor and Index Calculation Agent do not warrant or guarantee the accuracy or timeliness of calculations of the Index value and do not warrant or guarantee the availability of the Index value on any particular date or at any particular time. The Index Sponsor and 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 a result of a Contract failing to trade for any reason. Although the Index Calculation Agent will obtain information concerning Underlying Contracts from publicly available sources it believes reliable, it will not independently verify this information. Accordingly, no representation, warranty or undertaking (express or implied) is made by the Index Sponsor or Index Calculation Agent as to the accuracy and completeness of information concerning the Index.

In particular, the Index Sponsor and Index Calculation Agent are under no obligation to monitor whether or not a Market Disruption Event has occurred and shall not be liable for any losses resulting from (i) any determination that a Market Disruption Event has occurred or has not occurred in relation to a Contract, (ii) the timing relating to the determination that a Market Disruption Event has occurred in relation to a

Contract, or (iii) any actions taken or not taken by the Index Calculation Agent as a result of such determination that an Market Disruption Event has occurred.

NOTICES

The Index is based on Underlying Contracts, as described in the Methodology. The Index Sponsor and/or its affiliates actively trade Underlying Contracts and options on Underlying Contracts. The Index Sponsor 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 Contracts or are linked to the performance of the Index. The Index Sponsor and/or its affiliates may underwrite or issue other securities or financial instruments indexed to the Index, and the Index Sponsor 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 Sponsor trades or may trade as principal in instruments (or related derivatives) linked to the Index described in this document, and may have proprietary positions in the instruments (or related derivatives). The Index Sponsor may make a market in such instruments (or related derivatives), which may in extreme circumstances affect the levels of the Index described.

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THE MACQUARIE DYNAMIC CURVE CARRY EX-AGS & LIVESTOCK CAPPED 4X LEVERED INDEX

CONTENTS

INTRODUCTION

The Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped 4x Levered Index (hereafter, the *Index*) is designed as a rules based benchmark for exposure to the "commodity carry" investment strategy. This strategy aims to take advantage of storage-related risk premium, the existence of which can be explained by the fact that short-term storage is typically more expensive than long-term storage. The premium can be captured by taking long exposure to long-dated (*deferred*) commodity futures contracts and simultaneous short exposure to short-dated (*front month*) commodity futures contracts. If the shape of the futures curve remains unchanged, the strategy will generate a positive return.

The strategy is implemented by establishing a rule-set that, on a weekly basis, selects Commodities with positive yield attributes for inclusion in the Index. This selection is then supplemented with further Commodities, to the extent required, in order to meet certain diversification requirements. Pre-determined provisional weights (the *Initial Weights*) are assigned to each selected Commodity and then rebalanced to ensure no Commodity or Group of Commodities has a disproportionate effect on the Index. For each Commodity selected, the Index obtains a long (positive) exposure to a deferred futures contract in respect of that commodity and a short (negative) exposure to a front month futures contract.

GENERAL NOTES ON THE INDICES AND THE METHODOLOGY

The Index is designed to be replicable and readily accessible to market participants and is calculated daily in both an Excess Return and a Total Return format. To facilitate an understanding of the calculations, this Index Manual contains various worked examples which demonstrate the types of calculations needed to calculate the level of the Index on a particular date.

The Index is calculated and maintained by the Index Calculation Agent and supervised by the Index Sponsor and Oversight Committee, as described below. Once the Index has been created, the Components and Weights (or if appropriate, formula for calculating Weights) will not be amended going forward. All determinations with regard to the Index are made following the rules set out in this document, without discretion by the Index Sponsor or Index Calculation Agent.

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

INDEX GOVERNANCE

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

- A Managing Director in the Commodity Markets and Finance division of the Commodities and Financial Markets group;
- A Director from the Legal and Governance group;
- A representative from the Technology division of the Corporate Operations Group;
- A representative from the Business Operational Risk Management department of the Central division of the Commodities and Global Markets Group;
- A representative from the Risk division of the Risk Management Group; and
- A representative from the Compliance division of the Risk Management Group.

Each member of the Oversight Committee is sufficiently knowledgeable about commodity futures contracts and the commodities markets in general, and is required to act in good faith and in a commercially reasonable manner.

The Index Sponsor will make available upon request the names of the individuals forming the Oversight Committee.

The Oversight Committee has considered the features of the Indices, the intended, expected or known usage of the Indices and the materiality of existing or potential conflicts of interest together with overseeing the daily management and operations of the Indices.

The Oversight Committee has approved the Methodology and this Index Manual and will be available on an ad hoc basis for the approval of any changes to the Methodology, any contemplated cancellation of the Indices and the resolution of any issues which arise in relation to the Indices.

INDEX SPONSOR AND INDEX CALCULATION AGENT

THE INDEX SPONSOR

Macquarie Bank Limited is the Index Sponsor. Notwithstanding anything to the contrary, the Index Sponsor 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. The Index Calculation Agent is appointed by the Index Sponsor to calculate and maintain the Index from and until such time that the Index Sponsor 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 Oversight Committee.

The Index Sponsor may, from time to time, revise, amend and/or supplement this Manual. If such revisions or supplement materially affect the calculation of the Index, the Index Sponsor shall publish a new Manual no later than 30 days prior to implementation of the revised or supplemented rules. If it is not reasonably practicable to publish revised Manual 30 days prior to such changes, the revised Manual will be published as soon as reasonably practicable.

THE INDEX CALCULATION AGENT

The Technology division of the Corporate Operations Group (*COG*) of Macquarie Bank Limited acts as "Index Calculation Agent" in respect of the Index as of the date of this 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.

RELATIONSHIP OF THE INDEX SPONSOR AND THE INDEX CALCULATION AGENT

The Index Calculation Agent is appointed by the Index Sponsor, subject to the approval of the Index Oversight Committee. While, as of the date of publication of these rules, both the Index Sponsor and the Index Calculation Agent form part of Macquarie Bank Limited, they are independent divisions within the bank and 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 Sponsor.

DEFINITIONS

Component is the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped Index. The total number of Components is denoted by n.

Component Level in respect of an Index Business Day is the closing level of the Component, as published 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 most recent available Component Level on the most recent publication day.

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

Holdings Calculation Date is the last Index Business Day of a given calendar month.

Index Business Days are the days in the Index Calendar.

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

Index Name is the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped 4x Levered Index.

Index Sponsor is Macquarie Bank Limited (Macquarie), the entity that publishes or announces (directly or through an agent) the daily level of the Index.

Index Start Date is the 29th December 2006.

Index Ticker is MQCP631E Index (Bloomberg) for the Excess Return Index. The Index Ticker for the Total Return Index is available upon request.

Initial Index Level is the level of the Index on the Index Start Date, specified as 100.

Settlement Prices, in respect of an Index Business Day, are the prices of the Underlying Contracts, expressed in US dollars, published by the relevant Trading Facility and referred by them as the settlement price for that particular Contract. If the Index Business Day is not a trading day of the relevant Trading Facility, then the Settlement Price of that particular Contract will be the most recent available price on the most recent trading day of the relevant Trading Facility.

Target Holdings are a set of multipliers used for the daily calculations of the Index derived from the Weights.

Trading Facility The exchange, facility or platform on or through which a particular Contract is traded. A Trading Facility may, but is not required to, be a contract market, exempt electronic trading facility, derivatives transaction execution facility, exempt board of trade or foreign board of trade, as such terms are defined in the U.S. Commodity Exchange Act and the rules and regulations promulgated thereunder.

Treasury Bill Rate in respect of any Index Business Day is the 91-day discount rate for U.S. Treasury Bills, as reported by the U.S. Department of the Treasury's Treasury Direct service on the most recent of the weekly auction dates prior to said Index Business Day.

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

Weights are the weights periodically established according to Section 1 below.

CALCULATION OF THE MACQUARIE DYNAMIC CURVE CARRY EX-AGS & LIVESTOCK CAPPED 4X LEVERED INDEX

The Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped 4x Levered Index is designed to provide levered exposure to the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped Index. To achieve this, a 400% weight is allocated to the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped Index, a Component, on each Holdings Calculation Date.

> **Section 1** describes the weights that are assigned to the Component of the Index.

> **Section 2** describes the day-to-day calculation of the Index

> **Section 3** describes Market Disruption Events and the modifications to the calculations that the Index Sponsor will perform to determine the Index Level during and following any market disruptions.

SECTION 1: WEIGHT AND HOLDINGS CALCULATION

On each Holdings Calculation Date, the Weights of the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped 4x Levered Index shall be set according to the table below:

Table 1 – Index components and weights

Component	Weight
Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped Index	400%

On any Index Business Day, t, 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. As outlined in the next section, the Holdings, $\{H_{1,t}, …, H_{n,t}\}$, of the n Components are used as inputs on the daily calculation of the Index. In this section, we outline the Holdings, $\{H_{1,t}, …, H_{n,t}\}$, calculations on any Index Business Day, t.

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 that Holdings Calculations Date, R.

On any Holdings Calculation Date, R, let the Weight of Component i be denoted by $W_{i,R}$ so that $\{W_{1,R}, …., W_{n,R}\}$ are the Weights of the n Components in the Index as determined by the Weighting Methodology of the Index in respect of the Holdings Calculation Date R. Analogously, let $\{C_{1,R-1}, …., C_{n,R-1}\}$ 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, $\{TH_{1,R}, …., TH_{n,R}\}$, for each of the n Components in the Index are calculated according to the formula below:

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

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

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 rule:

(i)   If t is the Index Business Day immediately following the Holdings Calculation Date R, the Holdings $\{H_{1,t}, \dots, H_{n,t}\}$ are set equal to the Target Holdings $\{TH_{1,R}, \dots, TH_{n,R}\}$ calculated on that Holdings Calculations Date.

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

SECTION 2: DAILY INDEX CALCULATION

The Index is available in both an Excess Return and a Total Return format. The calculation of the Index Level differs depending on which of these two performance benchmarks the Index tracks.

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 underlying the Components of the Index without taking into consideration the cost of investment capital.

On each Index Business Day, t, the Excess Return Index Level, I_t, is calculated (rounded to eight decimal places) based on the value of the Excess Return Index on the preceding Index Business Day, I_{t-1}, and the change in level of each of the Components, according to the formula:

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

Where:

I_t is the Index Level on the close of 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;
$t-1$ is the Index Business Day immediately preceding Index Business Day t

The Total Return Index represents 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

underlying the Components of 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 Index Level, TI_t, is calculated (rounded to eight decimal places) based on the value of the Total Return Index on the preceding Index Business Day, TI_{t-1}, the Index Daily Return, IDR_t, and the **Collateral Return**, CR_t, according to the formula:

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

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

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*; and
>
> IDR_t is equal to $\frac{I_t}{I_{t-1}} - 1$

SECTION 3: MARKET DISRUPTION EVENTS

The Index is comprised of one Component, comprised of one or more commodity futures contracts. On any given Index Business Day, disruptions can occur that prevent these contracts from being traded. When this happens, it is necessary for the calculations of the affected Index to be adjusted so that it remains replicable by market participants i.e. adjustments must be made to the Index calculations to ensure that the Index Levels reflect contract prices that were attainable in the market at the times they would need to be traded in order to replicate the performance of the Index.

On a Holdings Calculation Date, this is generally achieved by delaying any changes to the composition of the Component (or component of the Component) that is directly dependent on the disrupted Underlying Contracts. On any other Index Business Day, given that the replication of the Index does not require trading of Underlying Contracts on such days, in the event that a price is not available for a particular Underlying Contract, that price will be appropriately substituted by the Index Calculation Agent in order for the calculations in respect of a particular Index Business Day to take place.

With respect to the daily 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 Calculation Agent in its sole discretion:

> (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 Calculation Agent determines that the event materially interferes with the ability of market participants to hedge the Index;
(v)	the occurrence of a Market Disruption Event in respect of an Underlying Contract that shares the same Commodity.

The Index Calculation Agent will determine the Index Level under Market Disruption Events in accordance with the following section.

INDEX CALCULATION UNDER MARKET DISRUPTION EVENTS

When a Market Disruption Event occurs or is continuing on a particular Index Business Day, the Index Calculation Agent will determine the basket of futures contracts that is equivalent to the basket of Underlying Contracts that the Index represents, in respect of that Index Business Day and in accordance with the Index Rules. Once this basket is determined, the Index Calculation Agent will make such adjustments as are necessary to ensure the Index Levels reflect contract prices that were attainable in the market at the times they would need to be traded in order to replicate the performance of the Index, as described below:

If, on a Holdings Calculation Day R (hereinafter called the "Disrupted Holdings Calculation Day"), a Market Disruption Event with respect to one or more Underlying Contracts occurs (each such Contract a "Disrupted Contract" until the first Index Business Day on which no Market Disruption Event exists or is continuing in respect of that Contract), then the Index Calculation for subsequent Index Business Days until the second consecutive non-disrupted Index Business Day will be modified as follows:

(i)	As long as a Market Disruption Event that occurred or was continuing on the Holdings Calculation Day R is continuing, the Index Level will be calculated according to the following formula:
	$$I_t = I_{t-1} + \sum_j H'_{j,t}\left(f_{j,t} - f_{j,t-1}\right)$$
	Where
	$H'_{j,t}$ is the Equivalent Holding for Underlying Contract j as calculated according to points (ii)-(v) below
	$f_{j,t}$ is the settlement price of Underlying Contract j as of the Index Business Day t
(ii)	The Index Calculation Agent shall determine the Equivalent Holdings and the Equivalent Target Holdings with respect to the Index. The Equivalent Holdings is a set

of holdings $\{H'_{1,R}, ..., H'_{m,R}\}$ which corresponds to the Underlying Contracts $\{F_1...F_m\}$ of the Index and perfectly describes the returns of the Index in the time period from the immediately preceding Holdings Calculation Day to the Holdings Calculation Day R. The Equivalent Target Holdings is a set of target holdings $\{TH'_{1,t}, ..., TH'_{m,t}\}$ for the Underlying Contracts, which perfectly describes the returns of the Index on the days following the Disrupted Holdings Calculation Day and until the first subsequent Holdings Calculation Day. The Equivalent Holdings and the Equivalent Target Holdings shall be determined for all Underlying Contracts, therefore some $H'_{j,t}$ and/or $TH'_{j,t}$ may have a value of 0.

(iii)   On the Index Business Day immediately following a Disrupted Holdings Calculation Day and until all Market Disruption Events that occurred on the Disrupted Holdings Calculation Day have ceased, the Equivalent Holdings $\{H'_{1,t}, ..., H'_{m,t}\}$ are calculated based on the following formula:

$$H'_{j,t} = TH'_{j,R} + SCH_{j,t}$$

Where:

$TH'_{j,R}$ means the Equivalent Target Holding of Contract j on Holdings Calculation Day R

$SCH_{j,t}$ means $\begin{cases} H'_{j,t-1} - TH'_{j,R} & if\ j\ is\ a\ Disrupted\ Contract;\ or \\ 0\ otherwise \end{cases}$

$H'_{j,t-1}$ means the Equivalent Holding of Contract j on Index Business Day t-1

(iv)   For each Disrupted Contract j, the Equivalent Holding $H'_{j,t}$ shall be equal to the Equivalent Target Holding $TH'_{j,t}$ on the first Index Business Day following a Disrupted Holdings Calculation Day, on which no Market Disruption Event in respect of that Contract j occurs or is continuing. If a Market Disruption Event continues for more than 5 Index Business Days following a Disrupted Holdings Calculation Day, the Index Calculation Agent shall, in good faith and in a commercially reasonable manner, determine the levels of each Disrupted Component j that will be used in the calculation of Holdings and Index Levels.

(v)   For each Underlying Contract that is not a Disrupted Contract, the Holding $H_{j,t}$ on the Index Business Day immediately following the Disrupted Holdings Calculation Day shall be the Equivalent Target Holding.

(vi)   On the second consecutive non-disrupted Index Business Day immediately following a Disrupted Holdings Calculation Day, the Index Sponsor will resume calculation of the Index in accordance with section 2.

Further explanation of Holdings and Equivalent Holdings:

In respect of any given Index Business Day, the Index is represented as a basket of its Components with a Holding in respect of each Component determined on the immediately preceding Holdings Calculation Date according to the Holdings Calculation section above. For the purposes of determination of whether disruption to futures trading affects the Index, however, the Holdings of the Index must instead be expressed in terms of the futures contracts that ultimately underlie the Index. As the Index is a linear basket of its Components, and because the same holds true of all components of those Components, (whether they themselves are futures or indices), it is possible to work through the Holdings of the Index, and, by ultimately breaking down each Index to the futures contracts that comprise it, determine a new

set of Holdings that, in respect of that Index Business Day, exactly represents the composition of the Index in terms of its Underlying Contracts.

CONTACTS

For more information on the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped 4x Levered Index please contact:

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THE MACQUARIE DYNAMIC CURVE CARRY EX-AGS & LIVESTOCK CAPPED INDEX

Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped Index

Index Manual
October 2018

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This Index Manual sets out the rules for the Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped Index (the *Index*) and reflects the methodology for determining the composition and calculation of the Index (the *Methodology*).

The Index Manual assumes the reader is a sophisticated financial market participant, with the knowledge and expertise to understand the investment strategy described herein and the associated risks. It is unsuitable for a retail or unsophisticated audience.

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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 an 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.

The Index and any financial instruments based on the Index may not be suitable for all investors and any investor must made 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.

HISTORICAL VALUES OF THE INDICES

Hypothetical back-tested historical values of the Index are not indicative of future performance. The Index Sponsor 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.

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 Sponsor, Index Calculation Agent and/or their affiliates. This document is intended to provide a summary of the Index it purports to describe. The Index Sponsor expressly disclaims (to the fullest extent permitted by applicable law) all warranties (express, statutory or implied) regarding this document 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 Sponsor and Index Calculation Agent do not warrant or guarantee the accuracy or timeliness of calculations of the Index value and do not warrant or guarantee the availability of the Index value on any particular date or at any particular time. The Index Sponsor and 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 a result of a Contract failing to trade for any reason. Although the Index Calculation Agent will obtain information concerning Contracts from publicly available sources it believes reliable, it will not independently verify this information. Accordingly, no representation,

warranty or undertaking (express or implied) is made by the Index Sponsor or Index Calculation Agent as to the accuracy and completeness of information concerning the Index.

In particular, the Index Sponsor and Index Calculation Agent are under no obligation to monitor whether or not a Market Disruption Event has occurred and shall not be liable for any losses resulting from (i) any determination that a Market Disruption Event has occurred or has not occurred in relation to a Contract, (ii) the timing relating to the determination that a Market Disruption Event has occurred in relation to a Contract, or (iii) any actions taken or not taken by the Index Calculation Agent as a result of such determination that an Market Disruption Event has occurred.

NOTICES

The Index is based on Contracts, as described in the Methodology. The Index Sponsor and/or its affiliates actively trade Contracts and options on Contracts. The Index Sponsor 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 Contracts or are linked to the performance of the Index. The Index Sponsor and/or its affiliates may underwrite or issue other securities or financial instruments Indexed to an Index, and the Index Sponsor or its affiliates may license an 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 Sponsor trades or may trade as principal in instruments (or related derivatives) linked to the Index described in this document, and may have proprietary positions in the instruments (or related derivatives). The Index Sponsor may make a market in such instruments (or related derivatives), which may in extreme circumstances affect the levels of the Index described.

CONTENTS

INTRODUCTION

The Macquarie Dynamic Curve Carry Ex-Ags & Livestock Capped Index (hereafter, the *Index*) is designed as a rules based benchmark for exposure to the "commodity carry" investment strategy. This strategy aims to take advantage of storage-related risk premium, the existence of which can be explained by the fact that short-term storage is typically more expensive than long-term storage. The premium can be captured by taking long exposure to long-dated (*deferred*) commodity futures contracts and simultaneous short exposure to short-dated (*front month*) commodity futures contracts. If the shape of the futures curve remains unchanged, the strategy will generate a positive return.

The strategy is implemented by establishing a rule-set that, on a weekly basis, selects Commodities with positive yield attributes for inclusion in the Index. This selection is then supplemented with further Commodities, to the extent required, in order to meet certain diversification requirements. Pre-determined provisional weights (the *Initial Weights*) are assigned to each selected Commodity and then rebalanced to ensure no Commodity or Group of Commodities has a disproportionate effect on the Index. For each Commodity selected, the Index obtains a long (positive) exposure to a deferred futures contract in respect of that commodity and a short (negative) exposure to a front month futures contract.

THE UNIVERSE OF SELECTABLE COMMODITIES

The universe of Commodities available for selection in the Index have been determined by reference to global commodity production and liquidity of available commodity futures contracts. Commodities relating to the agricultural and livestock sectors have been excluded, to address the requirements of investors who do not wish to participate in food-related futures contracts. Futures contracts relating to precious metals and Brent crude oil are also excluded, on the basis such futures contracts have not, historically, performed well in commodity carry investment strategies.

Index exposure to deferred or front month commodity futures contracts is obtained via allocation to Macquarie Single Commodity Indices. Each such index tracks a sequence of futures contracts relating to a single commodity and a particular point on the futures curve (either deferred or front month).

Information on the Macquarie Single Commodity Indices can be found in the Index Manual, dated October 2018, available at:

https://static.macquarie.com/dafiles/Internet/mgl/global/shared/corporate/trading-and-hedging/commodities/macquarie-single-commodity-indices.pdf?v=23

The universe of eight commodities and the Initial Weights applicable to each has been determined by the Index Sponsor as a result of a one-off process prior to the creation of the Index and will not change for the life of the Index.

THE SELECTION PROCESS

The Index rules identify Commodities for inclusion by examining a futures contract on each Commodity and calculating the difference (the *Yield Difference*) between the 'implied roll yield' of a deferred Contract and a (volatility-adjusted) implied roll yield of a front month Contract.

For each Commodity, the 'implied roll yield' is a measure of the difference in curvature of a commodity futures 'curve' at the front (where a Nearby Component Type has exposure) versus the back (where the Deferred Component Type has exposure). A positive roll yield indicates an expected positive carry return (derived by a short Nearby Component exposure and an equivalent long Deferred Component exposure in respect of the considered Commodity) if the futures 'curve' retains its shape. A negative implied yield indicates an expected negative carry return if the futures 'curve' retains its shape.

Commodities that exhibit a positive Yield Difference are automatically included in a provisional list.

THE DIVERSIFICATION REQUIREMENTS

Once the provisional list of Commodities has been determined, the Index rules then supplement that list in order to ensure the Index includes at least five Commodity Groups.

The Commodities in the final list are referred to as the 'Selected Commodities' to which the Index will allocate exposure. Exposure is allocated by assignment of an Initial Weight to each Selected Commodity, then re-balanced to ensure that the largest Group is weighted at no more than 32% of the Index and no other Group is weighted at more than 18%.

Note that, if there are less than five Commodity Groups represented in the set of commodities that exhibit a positive Yield Difference, Commodities with zero or negative Yield Differences will be included in the Index.

The process of selection and the application of the diversification requirements are described in Section 4 (*Allocation of Weights to Commodities*).

GENERAL NOTES ON THE INDICES AND THE METHODOLOGY

The Index is designed to be replicable and readily accessible to market participants. It is calculated daily in an excess return format. To facilitate an understanding of the calculations, the Methodology contains various worked examples which demonstrate the types of calculations needed to calculate the level of an Index on a particular date.

The Index is calculated and maintained by the Index Calculation Agent and supervised by the Index Sponsor and Supervisory Committee, as described below. The Index is not based upon submissions provided by third parties (or an affiliate of the Index Sponsor or Calculation Agent) or expert judgment. The Index is based upon actual transaction data sourced from regulated markets and exchanges.

The Index Sponsor will publish the Index Manual as well as any announcements regarding calculations relevant to the Index, in a timely manner on its website, http://www.macquarie.com/commodityindexdocumentation.

INDEX GOVERNANCE

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

- A Managing Director in the Commodity Markets and Finance division of the Commodities and Global Markets group;
- A Director from the Legal and Governance group;
- A representative from the Technology division of the Corporate Operations Group;
- A representative from the Business Operational Risk Management department of the Central division of the Commodities and Global Markets Group;
- A representative from the Risk division of the Risk Management Group; and
- A representative from the Compliance division of the Risk Management Group.

Each member of the Oversight Committee is sufficiently knowledgeable about commodity futures contracts and the commodities markets in general, and is required to act in good faith and in a commercially reasonable manner.

The Index Sponsor will make available upon request the names of the individuals forming the Oversight Committee.

The 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 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 approval of any changes to the Methodology, any contemplated cancellation of the Index and the resolution of any issues which arise in relation to the Index.

INDEX SPONSOR AND INDEX CALCULATION AGENT

THE INDEX SPONSOR

Macquarie Bank Limited is the Index Sponsor. Notwithstanding anything to the contrary, the Index Sponsor 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. The Index Calculation Agent is appointed by the Index Sponsor to calculate and maintain each Index from and until such time that the Index Sponsor 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 Oversight Committee.

The Index Sponsor may, from time to time, revise, amend and/or supplement this Manual. If such revisions or supplement materially affect the calculation of the Index, the Index Sponsor shall publish a new Manual no later than 30 days prior to implementation of the revised or supplemented rules. If it is not reasonably practicable to publish revised Manual 30 days prior to such changes, the revised Manual will be published as soon as reasonably practicable.

THE INDEX CALCULATION AGENT

The Technology division of the Corporate Operations Group (*COG*) of Macquarie Bank Limited acts as "Index Calculation Agent" in respect of the Index as of the date of this 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.

RELATIONSHIP OF THE INDEX SPONSOR AND THE INDEX CALCULATION AGENT

The Index Calculation Agent is appointed by the Index Sponsor, subject to the approval of the Index Oversight Committee. While, as of the date of publication of these rules, both the Index Sponsor and the Index Calculation Agent form part of Macquarie Bank Limited, they are independent divisions within the bank and 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 Sponsor.

DEFINITIONS

Components, are the Macquarie Single Commodity Indices specified in the table below:

Component	Commodity	Type	Bloomberg Ticker
Macquarie Minimum Drawdown Natural Gas Version B Beta ER (L)	Natural Gas	Deferred	MQSDLNGB
Macquarie Minimum Drawdown Crude Oil (WTI) Version B Beta ER (L)	Crude Oil (WTI)	Deferred	MQSDLCLB
Macquarie Minimum Drawdown Unleaded Gasoline Version B Beta ER (L)	Unleaded Gasoline	Deferred	MQSDLXBB
Macquarie Minimum Drawdown Heating Oil Version B Beta ER (L)	Heating Oil	Deferred	MQSDLHOB
Macquarie Minimum Drawdown Aluminium Version B Beta ER (L)	Aluminium	Deferred	MQSDLALB
Macquarie Minimum Drawdown Zinc Version B Beta ER (L)	Zinc	Deferred	MQSDLLXB
Macquarie Minimum Drawdown Nickel Version B Beta ER (L)	Nickel	Deferred	MQSDLLNB
Macquarie High Grade Copper Version D Beta ER (L)	Copper	Deferred	MQSDLHGD
Macquarie Minimum Drawdown Natural Gas Version B Beta ER (S)	Natural Gas	Nearby	MQSDSNGB
Macquarie Minimum Drawdown Crude Oil (WTI) Version B Beta ER (S)	Crude Oil (WTI)	Nearby	MQSDSCLB
Macquarie Minimum Drawdown Unleaded Gasoline Version B Beta ER (S)	Unleaded Gasoline	Nearby	MQSDSXBB
Macquarie Minimum Drawdown Heating Oil Version B Beta ER (S)	Heating Oil	Nearby	MQSDSHOB
Macquarie Minimum Drawdown Aluminium Version B Beta ER (S)	Aluminium	Nearby	MQSDSALB
Macquarie Minimum Drawdown Zinc Version B Beta ER (S)	Zinc	Nearby	MQSDSLXB
Macquarie Minimum Drawdown Nickel Version B Beta ER (S)	Nickel	Nearby	MQSDSLNB
Macquarie High Grade Copper Version D Beta ER (S)	Copper	Nearby	MQSDSHGD

For each Selected Commodity, the Index will take a long exposure in its Deferred Type of Component and a short exposure in its corresponding Nearby Type of Component. Both the Deferred Type and the Nearby Type Components roll their exposure over five Index Business Days starting on the last Index Business Day of the month.

The calculation and methodology of the Macquarie Single Commodity Indices is described in the " Macquarie Single Commodity Indices " Index Manual, which is available on request or at https://static.macquarie.com/dafiles/Internet/mgl/global/shared/corporate/trading-and-hedging/commodities/macquarie-single-commodity-indices.pdf?v=23.

Commodity, is each commodity corresponding to each Component. The total number of commodities is denoted by *n*.

Commodity Weights, are the weights periodically established by the Weighting Methodology for each Commodity and which are used to calculate the set of (Component) Weights, as described in Section 4.4 (*Determination of Component Weights*).

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 most recent available Component Level on the most recent publication day.

Contract, is a futures contract traded in a Trading Facility and having a Commodity as underlying.

Deferred Comparison Contract, in respect of each Commodity and a Holdings Calculation Date, is the Contract used for the purpose of the Deferred Yield calculation (Section 4.1 (*Yield Calculation*)) as defined in the table below.

For each Commodity on a Holdings Calculation Date and its associated Observation Date, the Deferred Comparison Contract is found in the below table on the row of the corresponding Commodity and the column of the month of that Observation Date.

Commodity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Natural Gas	N+	N+	U+	U+	V+	X+	F++	F++	H++	H++	H++	N++
WTI Crude	M	Q	Q	V	V	Z	Z	G+	G+	J+	J+	M+
Gasoline	N+	N+	U+	U+	V+	X+	F++	F++	H++	H++	H++	N++
Heating oil	N+	N+	U+	U+	V+	X+	F++	F++	H++	H++	H++	N++
Aluminum	M	Q	Q	V	V	Z	Z	G+	G+	J+	J+	M+
Copper	M	Q	Q	X	X	X	G+	G+	G+	J+	J+	M+
Zinc	M	Q	Q	V	V	Z	Z	G+	G+	J+	J+	M+
Nickel	M	Q	Q	V	V	Z	Z	G+	G+	J+	J+	M+

If a Deferred Comparison Contract is not available on that Observation Date, the futures contract with the closest Expiry that is later than the Expiry of the Deferred Comparison Contract and different to the Deferred Contract shall be selected. However, if such contract is unavailable, the futures contract with the latest Expiry that is different to the Deferred Contract shall be selected.

Deferred Contract, in respect of each Commodity on a Holdings Calculation Date and its associated Observation Date, is the Contract used for the purpose of the Deferred Yield calculation (Section 4.1 (*Yield Calculation*)) as defined in the table below.

For each Commodity on a Holdings Calculation Date and its associated Observation Date, the Deferred Contract is found in the below table on the row of the corresponding Commodity and the column of the

month of that Observation Date. For example, the Deferred Contract for an Observation Date in June in respect of Natural Gas is the X (November) contract.

Commodity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Natural Gas	N	N	U	U	V	X	F+	F+	H+	H+	H+	N+
WTI Crude	N	U	U	X	X	F+	F+	H+	H+	K+	K+	N+
Gasoline	N	N	U	U	V	X	F+	F+	H+	H+	H+	N+
Heating oil	N	N	U	U	V	X	F+	F+	H+	H+	H+	N+
Aluminum	N	U	U	X	X	F+	F+	H+	H+	K+	K+	N+
Copper	N	U	U	Z	Z	Z	H+	H+	H+	K+	K+	N+
Zinc	N	U	U	X	X	F+	F+	H+	H+	K+	K+	N+
Nickel	N	U	U	X	X	F+	F+	H+	H+	K+	K+	N+

Deferred Yield, in respect of a Commodity and a Holdings Calculation Date, is the implied roll yield calculated by determining the annualized gradient between the Deferred Contract and the Deferred Comparison Contract in respect of that Commodity, as defined in Section 4.1 (*Yield Calculation*).

Equivalent Holdings, in respect of an Index Business Day, are numbers which, if applied as Holdings to the Underlying Contracts of the Index, would perfectly describe the performance of the Index in respect of that Index Business Day. Equivalent Holdings are determined in order to facilitate calculation of the Index where any Underlying Contract is subject to a Market Disruption Event. The calculation of Equivalent Holdings is set out in Section 3 (*Market Disruption Events*) of the Index Calculation section below.

Equivalent Target Holdings, in respect of an Index Business Day, are numbers which, if applied as Holdings to the Underlying Contracts of the Index, would perfectly describe what the performance of the Index would have been if the Holdings of the Index were instead equal to the Target Holdings of the Index. Equivalent Target Holdings are determined in order to facilitate calculation of the Index where any Underlying Contract is subject to a Market Disruption Event. The calculation of Equivalent Target Holdings is set out in Section 3 (*Market Disruption Events*) of the Index Calculation section below.

Expiry, is the last tradeable date established by relevant Trading Facility for each Contract and is typically the date on which trading on that particular Contract ceases.

Final Group Weights, in respect of a Holdings Calculation Date, are the set of final capped Group Weights used in the calculation of Commodity Weights, as defined in Section 4.3 (*Determination of Commodity Weights*).

Groups, are Commodities bundled together based on their similarity and are used for weight capping purposes as set out in Section 4 (*Allocation of Weights*).

Groups	Commodities
Natural Gas	Natural Gas
Petroleum	WTI Crude, Heating Oil, RBOB Gasoline

Aluminium	Aluminium
Copper	Copper
Zinc	Zinc
Nickel	Nickel

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 1 (*Holdings Calculation*) of the Index Calculation section below. 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 Index Business Day on which the Target Holdings are periodically calculated in order to rebalance the Holding of each Component back to the specified Weights. The Holdings Calculation Date is the last Index Business Day of every week.

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

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

Initial Index Level, is 100.

Initial Weight, is the initial weight allocation of each Commodity, prior to application of the re-balancing rules:

Commodity	Initial Weight
Natural Gas	12.50%
WTI Crude	12.50%
Gasoline	12.50%
Heating oil	12.50%
Aluminum	12.50%
Copper	12.50%
Zinc	12.50%
Nickel	12.50%

Index Level, is the daily level of the Index, including the historic back-tested levels that are calculated according to the relevant section of this Methodology and published under the Index Ticker.

Index Start Date, is 29th December 2006.

Index Sponsor, is Macquarie Bank Limited (*Macquarie*), the entity that calculates and publishes or announces (directly or through an agent) the daily level of the Index.

Index Ticker, is **MQCP630E** Index (Bloomberg).

Interim Group Weight, is the intermediate weight in respect of a Group during the iterative capping procedure.

Nearby Comparison Contract, in respect of each Commodity on a Holdings Calculation Date and its associated Observation Date, is the Contract used for the purpose of the Nearby Yield calculation (Section 4.1 (*Yield Calculation*)) as defined in the table below.

For each Commodity on a Holdings Calculation Date and its associated Observation Date, the Nearby Comparison Contract is found in the below table on the row of the corresponding Commodity and the column of the month of that Observation Date.

Commodity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Natural Gas	K+	K+	N+	N+	U+	U+	Z+	Z+	F++	F++	G++	K++
WTI Crude	J	J	M	M	Q	Q	V	V	Z	Z	G+	G+
Gasoline	K+	K+	N+	N+	U+	U+	Z+	Z+	F++	F++	G++	K++
Heating oil	K+	K+	N+	N+	U+	U+	Z+	Z+	F++	F++	G++	K++
Aluminum	J	J	M	M	Q	Q	V	V	Z	Z	G+	G+
Copper	J	J	M	M	Q	Q	X	X	X	G+	G+	G+
Zinc	J	J	M	M	Q	Q	V	V	Z	Z	G+	G+
Nickel	J	J	M	M	Q	Q	V	V	Z	Z	G+	G+

If a Nearby Comparison Contract is not available on that Observation Date, the futures contract with the closest Expiry that is later than the Expiry of the Nearby Comparison Contract and different to the Nearby Contract shall be selected. However, if such contract is unavailable, the futures contract with the latest Expiry that is different to the Nearby Contract shall be selected.

Nearby Contract, in respect of each Commodity on a Holdings Calculation Date and its associated Observation Date, is the Contract used for the purpose of the Nearby Yield calculation (Section 4.1 (*Yield Calculation*)) as defined in the table below.

For each Commodity on a Holdings Calculation Date and its associated Observation Date, the Nearby Contract is found in the below table on the row of the corresponding Commodity and the column of the month of that Observation Date. For example, the Nearby Contract for an Observation Date in July in respect of Natural Gas is the Z (December) contract.

Commodity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Natural Gas	K	K	N	N	U	U	Z	Z	F+	F+	G+	K+
WTI Crude	K	K	N	N	U	U	X	X	F+	F+	H+	H+
Gasoline	K	K	N	N	U	U	Z	Z	F+	F+	G+	K+
Heating oil	K	K	N	N	U	U	Z	Z	F+	F+	G+	K+
Aluminum	K	K	N	N	U	U	X	X	F+	F+	H+	H+
Copper	K	K	N	N	U	U	Z	Z	Z	H+	H+	H+
Zinc	K	K	N	N	U	U	X	X	F+	F+	H+	H+
Nickel	K	K	N	N	U	U	X	X	F+	F+	H+	H+

Nearby Yield, in respect of a Commodity and a Holdings Calculation Date, is the implied roll yield calculated by determining the annualized gradient between the Nearby Contract and the Nearby Comparison Contract in respect of that Commodity, as defined in Section 4.1 (Yield Calculation).

Observation Date, in respect of each Holdings Calculation Date R, is the immediately preceding Index Business Day. The Nearby and Deferred Yield calculations and the Risk Adjustment for each Commodity for a Holdings Calculation Date *R* are defined with regards to its associated Observation Date *R-1,* as described in Section 4 (*Allocation of Weights to Commodities*).

Selected Commodities, in respect of the Holdings Calculation Date, is the set of Commodities selected for investment, as described in Section 4 (*Allocation of Weights to Commodities*).

Settlement Prices, are the prices, expressed in US dollars, published by the relevant exchange or trading facility and referred by them as the settlement price for that particular contract. If any Index Business Day is not a business day of the relevant exchange or trading facility, then the Settlement Price of that particular 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 1 (*Holdings Calculation*) of the Index Calculation section below.

Trading Facility, means each regulated futures exchange, facility or platform on or through which the Contracts underlying an Index are traded.

The **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.

Weights, are the weights periodically established by the Weighting Methodology and reflect the exposure of the Index to each Component. The invested set of Component Weights is available on request.

Weighting Methodology, is the weight allocation procedure detailed in Section 4 (*Allocation of Weights to Commodities*) of the Index Calculation section.

Yield Difference, in respect of a Commodity and Holdings Calculation Date, is the volatility-adjusted difference between the Deferred Yield and Nearby Yield in respect of that Commodity, as defined in Section 4.1 (*Yield Calculation*).

INDEX CALCULATION

On a daily basis the Index replicates the returns obtained by holding a basket of Components (each a Single Commodity Index), the Weights of which are determined according to Section 4 (*Allocation of Weights to the Components*) of this Index Calculation section and rebalanced periodically according to Section 1 (*Holdings Calculation*) of this Index Calculation section. The following sections detail how the Index Calculation Agent will calculate the daily Index Levels of the Index.

SECTION 1: HOLDINGS CALCULATION

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, $\{H_{1,t}, \cdots, H_{n,t}\}$, calculations on any Index Business Day, *t*.

On the Holdings Calculation Date of the Index, the Holding of each Component i, is rebalanced in accordance with the Weighting Methodology set out in Section 4 (*Allocation of Weights to the Components*) of this Index Calculation section.

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 that Holdings Calculations Date, *R*.

On any Holdings Calculation Date, *R*, let the Weight of each Component *i* be denoted by $W_{i,R}$ so that $\{W_{1,R}, \cdots, W_{n,R}\}$ are the Weights of the *n* Components in the Index as determined by the Weighting Methodology of the Index in respect of the Holdings Calculation Date *R*. Analogously, let $\{C_{1,R-1}, \cdots, C_{n,R-1}\}$ be the set of Component Levels of the Components on the Index Business Day immediately preceding Holdings Calculation Date, *R*. The Index Target Holdings, $\{TH_{1,R}, \cdots, TH_{n,R}\}$, for each of the *n* Components in the Index are calculated according to the formula below:

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

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*(0.4)/80 = 0.5

DAILY HOLDINGS CALCULATION

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

(iii)   If t is the Index Business Day immediately following the Holdings Calculation Date R, the Holdings $\{H_{1,t}, \cdots, H_{n,t}\}$ are set equal to the Target Holdings $\{TH_{1,R}, \cdots, TH_{n,R}\}$ calculated on that Holdings Calculations Date.

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

SECTION 2: DAILY INDEX 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 Index level, I_t, is calculated (rounded to eight decimal places) based on the value 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:

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

where:

I_t	is the Index Level on the close of 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;
$t-1$	is the Index Business Day immediately preceding Index Business Day t

The Index Start Date as well as the Initial Index Level, which is the value of the Index on the Index Start Date, are specified in the Definitions section above.

For example, if 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

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 Index Level on Business Day t would be 102.244.

SECTION 3: MARKET DISRUPTION EVENTS

The Index is ultimately comprised of a set of futures on physical commodities (the *Underlying Contracts*). On any given Index Business Day, disruptions can occur that prevent these Underlying Contracts from being traded. When this happens, it is necessary for the calculations of the Index to be adjusted so that it remains replicable by market participants i.e. adjustments must be made to the Index calculations to ensure that the Index Levels reflect futures prices that were attainable in the market at the times they would need to be traded in order to replicate the performance of the Index.

On a Holdings Calculation Date, this is generally achieved by delaying any changes to the composition of each Component (or component of a Component) that is directly dependent on the disrupted Underlying Contracts. On any other Index Business Day, given that the replication of the Index does not require trading of Underlying Contracts on such days, in the event that a price is not available for a particular Underlying Contract, that price will be appropriately substituted by the Index Calculation Agent in order for the calculations in respect of a particular Index Business Day to take place.

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 Sponsor reasonably determines that the event materially interferes with the ability of market participants to hedge the Index;

(v)   the occurrence of a Market Disruption Event in respect of an Underlying Contract that shares the same Commodity.

The Index Calculation Agent will determine the Index Level under Market Disruption Events in accordance with the following section.

INDEX CALCULATION UNDER MARKET DISRUPTION EVENTS

When a Market Disruption Event occurs or is continuing on a particular Index Business Day, the Index Calculation Agent will determine the basket of futures contracts that is equivalent to the basket of Components that the Index represents, in respect of that Index Business Day. Once this basket is determined, the Index Calculation Agent will make such adjustments as are necessary to ensure the Index Levels reflect contract prices that were attainable in the market at the times they would need to be traded in order to replicate the performance of the Index, as described below.

If, on a Holdings Calculation Date *R,* a Market Disruption Event with respect to one or more Underlying Contracts occurs (such day, a "Disrupted Holdings Calculation Date" and each such Contract a "Disrupted Contract"), then the Index Calculation for subsequent Index Business Days, until the second consecutive non-disrupted Index Business Day, will be modified as follows:

(vii)   As long as a Market Disruption Event that occurred or was continuing on the Holdings Calculation Date R is continuing, the Index Level will be calculated according to the following formula:

$$I_t = I_{t-1} + \sum_j H'_{j,t}\left(f_{j,t} - f_{j,t-1}\right)$$

where

$H'_{j,t}$ is the Equivalent Holding for Underlying Contract *j* as calculated according to sub-paragraphs (ii)-(v) below

$f_{j,t}$ is the settlement price of Underlying Contract *j* as of the Index Business Day t

(viii)   The Index Calculation Agent shall determine the Equivalent Holdings and the Equivalent Target Holdings with respect to the Index.

The Equivalent Holdings is the set of holdings *{H'$_{1,R}$, ···, H'$_{m,R}$}* of Underlying Contracts *{F$_1$...F$_m$}* which perfectly describes the returns of the Index in the time period from the immediately preceding Holdings Calculation Date to the Holdings Calculation Date R.

The Equivalent Target Holdings is a set of target holdings *{TH'$_{1,t}$, ···, TH'$_{m,t}$}* for the Underlying Contracts, which perfectly describes the returns of the Index on the days following the Disrupted Holdings Calculation Date and until the first subsequent Holdings Calculation Date.

The Equivalent Holdings and the Equivalent Target Holdings shall be determined for all Underlying Contracts, therefore some *H'$_{j,t}$* and/or *TH'$_{j,t}$* may have a value of 0.

(ix)   On the Index Business Day immediately following a Disrupted Holdings Calculation Date and until all Market Disruption Events that occurred on the Disrupted Holdings Calculation Date have ceased, the Equivalent Holdings *{H'$_{1,t}$, ···, H'$_{m,t}$}* are calculated based on the following formula:

$$H'_{j,t} = TH'_{j,R} + SCH_{j,t}$$

where:

$TH'_{j,R}$ means the Equivalent Target Holding of Contract *j* on Holdings Calculation Date R

$$SCH_{j,t} \quad \text{means} \begin{cases} H'_{j,t-1} - TH'_{j,R} & \text{if } j \text{ is a Disrupted Contract; or} \\ 0 & \text{otherwise} \end{cases}$$

$H'_{j,t-1}$ means the Equivalent Holding of Contract j on Index Business Day t-1

(x)   For each Disrupted Contract *j*, the Equivalent Holding H$'_{j,t}$ shall be equal to the Equivalent Target Holding TH$'_{j,t}$ on the first Index Business Day following a Disrupted Holdings Calculation Date on which no Market Disruption Event in respect of that Contract j occurs or is continuing. If a Market Disruption Event continues for more than 5 Index Business Days following a Disrupted Holdings Calculation Date, the Index Calculation Agent shall, in good faith, determine the levels of each Disrupted Component *j* that will be used in the calculation of Holdings and Index Levels.

(xi)   For each Underlying Contract that is not a Disrupted Contract, the Holding $H_{j,t}$ on the Index Business Day immediately following the Disrupted Holdings Calculation Date shall be the Equivalent Target Holding.

(xii)   On the second consecutive non-disrupted Index Business Day immediately following a Disrupted Holdings Calculation Date, the Index Calculation Agent will resume calculation of the Index in accordance with section 2.

Further explanation of Holdings and Equivalent Holdings:

In respect of any given Index Business Day, the Index is represented as a basket of its Components with a Holding in respect of each Component determined on the immediately preceding Holdings Calculation Date according to the Holdings Calculation section above. For the purposes of determination of whether disruption to futures trading affects the Index, however, the Holdings of the Index must instead be expressed in terms of the futures contracts that ultimately underlie the Index. As the Index is a linear basket of its Components, and because the same holds true of all components of those Components, (whether they themselves are futures or indices), it is possible to work through the Holdings of the Index, and, by ultimately breaking down each Index to the futures contracts that comprise it, determine a new set of Holdings that, in respect of that Index Business Day, exactly represents the composition of the Index in terms of its Underlying Contracts.

SECTION 4: ALLOCATION OF WEIGHTS

Summary of Weighting Methodology:

In accordance with the investment strategy of the Index, the principle behind the weight allocation procedure (*Weighting Methodology*) is to calculate the risk adjusted Yield Difference between the Deferred Contract and the Nearby Contract in respect of each Commodity and to take exposure on Commodities that exhibit a positive Yield Difference. In cases where less than five Commodity Groups are represented by the set of Commodities with positive Yield Difference, further Commodities (which either have zero or negative Yield Differences) will be included in the Index, until the Index is represented by at least five different Commodity Groups.

Once the target set of Commodities has been determined (the *Selected Commodities*), each Selected Commodity will be allocated an Initial Weight. The Initial Weights are summed by Group (each such sum, an *Initial Group Weight*) and then normalised such that the sum of the weights allocated to each Group represented in the Index is equal to 100%.

The Groups are then subject to an iterative capping procedure whereby the Group with the largest normalised weight is capped at 32% while all remaining Groups are capped at 18%. Any excess weight (above the caps) is distributed in proportion to the remaining uncapped Groups until the weight of each Group is equal to or less than the Group cap (the final Group weights being the *Finalised Group Weights*).

Once the Final Group Weights have been determined, each Selected Commodity is scaled upwards or downwards in proportion to the Initial Weights, such that the sum of the weights of all commodities represented in a Group is equal to that Group᾿s Final Group Weight (and, accordingly, the sum of the Commodity Weights of the Selected Commodities is equal to 100%). Finally, the Commodity Weight of each Selected Commodity is converted into a Weight attributable to the long (deferred) Component associated with that Commodity and a Weight attributable to the short (nearby) Component associated with that Commodity.

The Weighting Methodology is outlined in detail in the next sections as follows:

Section 4.1 describes how the Nearby Yield, Deferred Yield and Yield Difference are calculated;
Section 4.2 describes how the set of Commodities are selected;
Section 4.3 describes how the set of Commodity Weights are calculated;
Section 4.4 describes how the Weights of each Component are derived from the Commodity Weights.

SECTION 4.1: YIELD CALCULATION

For each Commodity, on a Holdings Calculation Date, *R*, for the purpose of the Nearby Yield calculation, if the Nearby Comparison Contract has a **shorter** maturity than the Nearby Contract or for the purpose of the Deferred Yield calculation, if the Deferred Comparison Contract has a **shorter** maturity than the Deferred Contract then:

$$Y_{i,R-1,TYPE} = \left(\frac{PC_{i,R-1,TYPE}}{P_{i,R-1,TYPE}} \right)^{\frac{1}{TimeDiff_{TYPE}}} - 1$$

$$TimeDiff_{TYPE} = \left(Expiry_{P,TYPE} - Expiry_{PC,TYPE}\right)/365$$

If the Nearby Comparison Contract has a **longer** maturity than the Nearby Contract or for the purpose of the Deferred Yield calculation, if the Deferred Comparison Contract has a **longer** maturity than the Deferred Contract then:

$$Y_{i,R-1,TYPE} = \left(\frac{P_{i,R-1,TYPE}}{PC_{i,R-1,TYPE}}\right)^{\frac{1}{TimeDiff_{TYPE}}} - 1$$

$$TimeDiff_{TYPE} = \left(Expiry_{PC,TYPE} - Expiry_{P,TYPE}\right)/365$$

Where

$PC_{i,R-1,TYPE}$ is the Settlement Price of the Comparison Contract in respect of the Contract TYPE (either DEFERRED or NEARBY) on the Observation Date for Holdings Calculation Date R

$P_{i,R-1,TYPE}$ is the Settlement Price of the Contract in respect of the Contract TYPE (either DEFERRED or NEARBY) on the Observation Date for Holdings Calculation Date R

$Expiry_{PC,TYPE}$ is the expiry date of the Comparison Contract in respect of the Contract TYPE (either DEFERRED or NEARBY)

$Expiry_{P,TYPE}$ is the expiry date of the Contract in respect of the Contract TYPE (either DEFERRED or NEARBY)

For each Commodity, on Holdings Calculation Date, R, the Yield Difference is calculated according to the formula below:

$$YD_{i,R-1} = Y_{i,R-1,DEFERRED} - abs\left(RiskAdjust_{i,R-1}\right) * Y_{i,R-1,NEARBY}$$

$$RiskAdjust_{i,R-1} = \min\left(-0.75, \max\left(-1.25, -\frac{Std(i, R-1, Deferred)}{Std(i, R-1, Nearby)}\right)\right)$$

Where:

$RiskAdjust_{i,R-1}$ is the Risk Adjustment Factor in respect of Commodity i on the Observation Date for Holdings Calculation Date R.

$Std(i, R-1, Deferred)$ is the standard deviation (with one degree of freedom/Bessel's correction) of the daily returns of the Deferred Contract in respect of Commodity i from (but excluding) the Observation Date for the previous Holdings Calculation Date to (and including) the Observation Date for the current Holdings Calculation Date R.

$Std(i, R-1, Nearby)$ is the standard deviation of the daily returns of the Nearby Contract in respect of Commodity i from (but excluding) the Observation Date for the previous Holdings Calculation Date to (and including) the Observation Date for the current Holdings Calculation Date R.

The Risk Adjustment Factor, $RiskAdjust_{i,R-1}$, aims to adjust the exposure applied to the Nearby Contract to account for the difference in the volatility between the long exposure (Deferred Contract) and the short exposure (Nearby Contract).

SECTION 4.2: DETERMINATION OF SELECTED COMMODITIES

Step 1:

On each Holdings Calculation Date R, the Yield Difference for each of the eight Commodities are ranked from highest (most positive) to lowest (most negative).

All Commodities that have a **positive** Yield Difference, $PosCommod_{R-1}$, are initially selected to be represented in the Index.

Step 2:

If there are less than five Groups represented after the selection process in Step 1 is performed, then additional Commodities are selected in order of descending Yield Difference from the remaining unselected Commodity Groups, until the Index is represented by 5 Groups. In the unlikely scenario where two or more Commodities have the same Yield Difference, the Commodity with the highest Yield Difference calculated on the previous Holdings Calculation Date will be selected first.

If the number of additional Commodities in this step is denoted by $AddCommod_{R-1}$ then the set of Selected Commodities is:

$$SelectedCommodities_{R-1} = PosCommod_{R-1} \cup AddCommod_{R-1}$$

(Where $AddCommod_{R-1}$ is empty if the Index is represented by at least 5 Groups after the process in Step 1 is performed.)

SECTION 4.3: DETERMINATION OF COMMODITY WEIGHTS

On each Holding Calculation Date R, each Selected Commodity will be assigned an Initial Weight $IW_{i,R-1}$ corresponding to Commodity i which is determined with reference to the table under the definition " Initial Weight".

On each Holding Calculation Date R, each Group g has associated with it a corresponding Initial Group Weight, $IGW_{g,R-1}$, given by the formula below:

$$IGW_{g,R-1} = \sum_{i \in g} IW_{i,R-1}$$

Where:

$IW_{i,R-1}$ is the Initial Weight applied to the Selected Commodity in respect of commodity i belonging to Group g on Holdings Calculation Date R.

The Initial Group Weights are normalized to add up to 100% (that is, the weights of each Group are scaled in proportion to the Initial Group Weights so that the weights sum to 100%):

$$NGW_{g,R-1} = \frac{IGW_{g,R-1}}{\sum_{g'} IGW_{g',R-1}}$$

Where

$NGW_{g,R-1}$ is the Normalized Group Weight in respect of group g on Holdings Calculation Date R, which are then subject to capping.

The Group with the largest Normalized Group Weight is capped at 32% and all remaining Groups are capped at 18% to produce the set of Final Group Weights ($FGW_{g,R-1}$) in respect of a Group on Holdings Calculation Date R.

If there are two or more Groups with the same largest Normalized Group Weight, the Group that contains the Commodity with the highest Yield Difference will be selected to be capped at 32%. In the unlikely scenario where two or more Commodities from two or more separate Groups have the same maximum Yield Difference, the Group that contains the Commodity with the highest Yield Difference calculated on the previous Holdings Calculation Date will be selected to be capped at 32%.

To achieve this capping, the following iterative procedure is applied.

$Excess = 0$, immediately before the Iterative Procedure begins.

ITERATIVE PROCEDURE

For any Group where the normalized Group weight is greater than the corresponding cap, then:

$$FGW_{g,R-1} = Cap_g$$

$$Excess = Excess + IntGW_{g,R-1} - Cap_g$$

Where

$FGW_{g,R-1}$ is the Final Group Weight in respect of Group g on Holdings Calculation Date R.

$Excess$ is the excess weight that is to be distributed to all remaining uncapped groups as part of this iterative procedure.

$IntGW_{g,R-1}$ is the Interim Group Weight in respect of Group g on Holdings Calculation Date R, and is equal to $NGW_{g,R-1}$ the first time the iterative procedure is applied and defined below for each subsequent iteration.

Cap_g is equal to 32% if Group g has the largest Normalized Group Weight and equal to 18% otherwise.

The excess weight is then distributed in proportion to all uncapped Groups as follows

$$IntGW_{u,R-1} = UncappedGW_{u,R-1} + \frac{UncappedGW_{u,R-1}}{\sum_{u'=1}^{m} UncappedGW_{u',R-1}} * Excess$$

$$Excess \quad = 0$$

Where

$UncappedGW_{u,R-1}$ is the uncapped Group Weight in respect of each Group u on Holdings Calculation Date R, that has a weight less than the Cap

$\sum_{u'=1}^{m} UncappedGW_{u',R-1}$ is the sum of all the uncapped Group Weights

The iterative procedure is repeated until the weight of each Group is equal to or less than their corresponding Caps, in which case:

For all Groups that have a weight **less than** their corresponding Cap: $FGW_{g,R-1} = IntGW_{g,R-1}$

For all Groups that have a weight **equal to** their corresponding Cap: $FGW_{g,R-1} = Cap_g$

Once the Final Group Weights are determined, each Selected Commodity within the Groups represented in the Index is scaled in proportion to its Initial Weight such that the sum of the Commodity Weights of each Selected Commodity in a particular Group is equal to the Final Group Weight. Thus, for each Group g represented in the Index, the Commodity Weight $CW_{i,g,R-1}$ in respect of each Commodity i one Index Business Day prior to the Holdings Calculation Date R, is given by:

$$CW_{i,g,R-1} = \left(IW_{i,R-1} \div \sum_{j \in g} IW_{j,R-1} \right) * FGW_{g,R-1}$$

Where $\sum_{j \in g} IW_{j,R-1}$ is the sum of all Initial Weights of each Commodity j in Group g

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SECTION 4.4: DETERMINATION OF COMPONENT WEIGHTS

Lastly, the set of Component Weights, $\{W_{1,R}, \cdots, W_{n,R}\}$ on the Holdings Calculation Date R is defined as follows:

$$W_{i,R} = \begin{cases} 0 \text{ if } Commodity_i \notin SelectedCommodities_{R-1} \\ CW_{i,g,R-1} \text{ if } Commodity_i \in SelectedCommodities_{R-1} \text{ AND } Component_i \text{ } Type \text{ is Deferred} \\ RiskAdjust_{i,R-1} * CW_{i,g,R-1} \text{ if} Commodity_i \in SelectedCommodities_{R-1} \text{ and } Component_i \text{ } Type \text{ is Nearby} \end{cases}$$

For avoidance of doubt, $CW_{i,g,R-1}$ will be a positive number and $RiskAdjust_{i,R-1} * CW_{i,g,R-1}$ will be a negative number.

CONTACTS

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