

Macquarie Single Commodity Curve Spread Component Indices

**Index Manual
July 2017**

NOTICES AND DISCLAIMERS

BASIS OF PROVISION

This Index Manual sets out the rules for the Macquarie Single Commodity Curve Spread Component Indices (each, an *Index*) and reflects the methodology for determining the composition and calculation of each Index (the *Methodology*). The Methodology and each 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, summarize, 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 (available at, <http://static.macquarie.com/dafiles/Internet/mgl/global/shared/corporate/trading-and-hedging/commodities/macquarie-single-commodity-curve-spread-indices.pdf>), 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 an 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 Levels of an existing 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 an 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 an Index, without reason, provided it publishes its intention to do so at least six months prior to cessation of calculation and publication of the relevant Index levels.

If you have been granted written consent by the Index Sponsor to reference an 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.

ADDITIONAL INDICES

The Index Sponsor may, at any time, commence calculation and publication of new Indices pursuant to the Methodology. In such circumstances the Index Sponsor will publish a revised version of the Methodology, revised only to augment Appendix A with the new Index Specifications relating to the new Indices.

NOT RESEARCH OR AN OFFER

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

This document does not constitute a prospectus, offer, invitation or solicitation to buy or sell financial instruments and is not intended to provide the sole basis for any evaluation of the securities or any other financial instruments which may be discussed within, referred to or based upon an Index. Any offering or potential transaction that may be related to an 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.

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

HISTORICAL VALUES OF THE INDICES

Hypothetical back-tested historical values of an 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 indices 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 any Index value and do not warrant or guarantee the availability of any 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 any 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 any 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 Indices are 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 an 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 an Index. The Index Sponsor trades or may trade as principal in instruments (or related derivatives) linked to an index described in this document, and may have proprietary positions in the instruments (or related derivatives). The Index 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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MACQUARIE SINGLE COMMODITY CURVE SPREAD COMPONENT INDICES

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INTRODUCTION

Physical commodities are not easily investable on a direct and replicable basis. Futures contracts on commodities, however, represent a widely utilized synthetic proxy for direct investment in commodities. For this reason, each Index is constituted by, and reflects the price performance of, an exchange traded futures contract relating to a physical commodity. In order to ensure the continuity of each Index, when the futures contract that underlies an Index approaches expiration, it will be replaced by an identical contract with a later expiration (the Index will 'roll' from one contract into the next). Each Single Commodity Index thus tracks a sequence of futures contracts relating to a single commodity (the universe of tradable calendar futures contracts on a commodity, known as the 'futures curve'). Accordingly, the Macquarie Single Commodity Curve Spread Component Indices, together, represent systematic and replicable benchmarks for investment in individual commodities.

INDIVIDUAL INDICES:

Each Index is differentiated by the Index Specifications corresponding to that Index. The Index Specifications set out (i) certain parameters specific to an Index (such as the Index Name and Index Start Date), (ii) the calendar contracts that underlie the Index, and (iii) the parameters that determine the timing of rolling from one contract to the next (i.e. the point on the futures curve targeted by the Index). Accordingly, the Index Specification determines exposure to a particular part of the futures curve of a commodity and the Index will reflect the performance of such point on the curve.

GENERAL NOTES ON THE INDICES AND THE METHODOLOGY

The Indices are designed to be replicable and readily accessible to market participants and are calculated daily in an Excess Return. 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 Indices are calculated and maintained by the Index Calculation Agent and supervised by the Index Sponsor and Oversight Committee, as described below. Once an Index has been created, the Contract that underlies it and the Static Contract Roll Schedule, which determines when the Index rolls from one Contract expiration into another, will be fixed and will not be amended going forward. All determinations with regard to the Indices are made following the rules set out in this document, without discretion by the Index Sponsor or Index Calculation Agent.

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

DOCUMENT STRUCTURE

This document contains all the information necessary to calculate the Macquarie Single Commodity Curve Spread Component Indices. The Index Specifications serve as inputs to the index calculation section of the document, which describes the process of calculating each index in respect of each Index Business

Day. Thus, the index calculation section should be read in conjunction with the appropriate Index Specification for the purposes of replicating a particular Index.

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 Senior Managing Director in the Metals, Mining and Agriculture 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 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

Bloomberg Ticker, in respect of an Index, is the ticker under which the relevant Index Level will be published, as specified in the relevant Index Specification.

Commodity, in respect of an Index, is the physical commodity that underlies the futures contracts referenced by the Index, as specified in the relevant Index Specification.

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

The **Contract Rolling In** of a Commodity on an Index Business Day is the Contract specified in the Static Contract Schedule Table of the Index Specification for the calendar month immediately following — with January following December — the calendar month to which that particular Index Business Day belongs. The Contract Rolling In represents the Contract to which the Index is exposed during and subsequent to the Roll Period in which the Index rolls its exposure from the Contract Rolling Out to the Contract Rolling In.

The **Contract Rolling Out** of a Commodity on an Index Business Day is the Contract specified in the Static Contract Schedule Table of the Index Specification for the calendar month to which that particular Index Business Day belongs. The Contract Rolling Out represents the Contract to which the Index is exposed prior to and during the Roll Period in which the Index rolls its exposure from the Contract Rolling Out to the Contract Rolling In.

Holding Rolling In, in respect of an Index, is a multiplier used in calculating the Index Level and is defined in the relevant Index Specification. The Holding Rolling In represents the exposure of the Index to the Contract Rolling In.

Holding Rolling Out, in respect of an Index, is a multiplier used in calculating the Index Level and is defined in the relevant Index Specification. The Holding Rolling Out represents the exposure of the Index to the Contract Rolling Out.

Index Business Days, in respect of an Index, are the days in the Index Calendar.

Index Calendar, in respect of an Index, is the calendar of days in respect of which an Index Level will be published, as specified in the relevant Index Specification.

Index Level, in respect of an Index Business Day and an Index, is the level of that Index as calculated and published by the Index Calculation Agent.

Index Name is the name that identifies each index, as specified in the relevant Index Specification. The name will usually contain the name of the underlying commodity of the index (e.g. “corn”), as well as an internal designation which indicates the type of Static Contract Roll Schedule that is used in the construction of the Index (e.g. “type A”).

An **Index Specification** is a set of variables peculiar to a particular Index, as set out in an Index Specification Table for that Index in Appendix A hereto.

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

Index Start Date, in respect of an Index, is the first Index Business Day in respect of which an Index Level is calculated by the Index Calculation Agent, as specified as such in the Index Specification.

Initial Index Level, in respect of an Index, is the Level of the Index on the Index Start Date, as specified in the relevant Index Specification.

Roll Start Date, in respect of an Index, is the Index Business Day on which the index exposure periodically starts to move from the Contract Rolling Out into the Contract Rolling In for each Commodity. The Roll Start Date is specified in the Index Specification and is represented by a number denoting the Index Business Day that is the Roll Start Date in respect of each month. If the Roll Start Date is a negative number, the Roll Start Date is the Index Business Day that falls the specified number of Index Business Days prior to the first Index Business Day of the month with which that Roll Period is associated. Therefore, if the Roll Start Date specified in respect of an Index is 5, the Roll Start Date for that Index will be the 5th Index Business Day of each month; if Roll Start Date is -1, the Roll Start Date for that Index will be the last Index Business Day of the preceding month, etc.

Roll Length, in respect of an Index, is the number of the Index Business Days required to periodically move the exposure from the Contract Rolling Out into the Contract Rolling In for each Commodity. The Roll Length value is specified in the Index Specification.

Roll Period, in respect of an Index, is the set of Index Business Days consisting of the period starting from, and including, the Roll Start Date and lasting for the number of Index Business Days established by the Roll Length.

Roll Fraction, in respect of an Index, means the fraction of exposure rolled out of the Contract Rolling Out and into the Contract Rolling In on each Index Business Day of the Roll Period. The Roll Fraction is equal to the inverse of Roll Length.

The **Roll Weights** allocate exposure between the Contract Rolling Out and the Contract Rolling In through a calendar month for each of the Commodities.

Settlement Prices, in respect of an Index Business Day, are the prices of the Contract Rolling In and the Contract Rolling Out, 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.

Start Level, in respect of an Index, is the Index Level of an Index on the Start Date, as specified in the relevant Index Specification.

Start Date, in respect of an Index, is the first Index Business Day on which the Index Calculation Agent will calculate and publish a Level for that Index. The Index Calculation Agent may calculate, but not publish, the Index level in respect of Index Business Days preceding the Start Date if that is required for calculating the Index Level of the Index on the Start Date or on following days.

Static Contract Roll Schedule, in respect of an Index, denotes the expiring futures contracts that will be removed from the Index over the Roll Period of each month, starting with January and ending with December. The futures contract that is removed each month will be replaced with the futures contract

that is scheduled to be removed the following month. If a “+” sign is included next to a letter, the futures contract indicated is the one associated with the corresponding month of the year following the month in respect of which this futures contract is selected. The letters translate to months according to the following table:

Month	Letter
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

NB: On certain occasions the expiry of a contract may fall outside the month with which it is associated. In all situations the schedule will denote the month with which a futures contract is associated in its corresponding Trading Facility.

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

Treasury Bill Rate 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 (<http://www.treasurydirect.gov/RI/OFBills>).

INDEX CALCULATION

On a daily basis each Index replicates the returns obtained by holding a specified Contract (or more than one Contract during a Roll Period) from one trading day to the next. The futures contract(s) associated with each Index will change through time, with futures contracts being added and removed according to a calendar month contract schedule that is part of the set of parameters specified in its Index Specification, as described in more detail in Section 1 below.

The following sections detail how the Index Calculation Agent will calculate the daily Index Levels of each Index based on the inputs set out in the relevant Index Specification.

SECTION 1: ROLL WEIGHTS CALCULATION

Futures contracts have fixed expiry dates, after which trading comes to an end. In order to accurately reflect a financial investment in a physical commodity, futures contracts are removed from the basket which is tracked by the Index prior to their expiry in a process called “rolling” the futures contracts.

Contracts are rolled on the close of each business day and over a series of business days. Rolling entails adjusting the Contracts the Index references to reduce exposure to the Contract which is scheduled to expire and increase exposure to a further dated Contract. Thus, during the roll period the Index will reference more than one Contract, with the proportion of exposure to each Contract changing on the close of each business day. This is achieved by applying a “roll weight” to each Contract which, over the duration of the roll period, will change to reflect the changing composition of Contract associated with each Index. These weights are then used to calculate the Index on the following business day.

The Roll Weights allocate exposure between the Contract Rolling Out and the Contract Rolling In throughout a calendar month. They are calculated daily for each Commodity t according to the following rule:

- (i) The Roll Weight of Commodity i on Index Business Day t , $RW_{i,t}$, is equal to one (1) if the Index Business Day, t , precedes the Roll Period for the calendar month to which the Index Business Day t belongs.
- (ii) The Roll Weight of Commodity i on Index Business Day t , $RW_{i,t}$, will decrease by the amount defined by the Roll Fraction on each day of the Roll Period. That is, $RW_{i,t} = RW_{i,t-1} - \text{Roll Fraction}$ for each Index Business Day t belonging to the Roll Period until $RW_{i,t}$ is equal to zero at the end of the Roll Period.
- (iii) The Roll Weight of Commodity i on Index Business Day t , $RW_{i,t}$, is set equal to zero (0) for all Index Business Days succeeding the Roll Period in the calendar month to which the Index Business Day t belongs.
- (iv) If a Market Disruption Event occurs, then each Contract will have its roll postponed as described in Section 3.

For example, an Index that has a Roll Period that starts on the fifth (5th) Index Business Day of each month and has a Roll Length of five (5) Index Business Days.

The Roll Weights calculations for January 2014 are then calculated as follows:

- In respect of January 2 to January 7 (inclusive), i.e. from the first (1st) to the fourth (4th) Index Business Day in January, the Roll Weight is equal to 1.
- In respect of January 8, which is the first (1st) Index Business Day in the January Roll Period, the Roll Weight is equal to 0.8
- In respect of January 9, which is the second (2nd) Index Business Day in the January Roll Period, the roll weight is equal to 0.6
- In respect of January 10, which is the third (3rd) Index Business Day in the January Roll Period, the Roll Weight is equal to 0.4
- In respect of January 13, which is the fourth (4th) Index Business Day in the January Roll Period, the Roll Weight is equal to 0.2
- In respect of January 14, which is the fifth (5th) Index Business Day in the Roll Period, the Roll Weight is equal to 0
- In respect of all other Index Business Days in January, the roll weight is equal to 0

Established market practice is that indices based on futures contracts are rolled over multiple days, generally starting on the fifth (5th) Index Business Day of each month and continuing over five (5) days. This convention may be changed in order to obtain exposure to specific market mechanics, for example rolling over more than five days in order to further lessen the exposure of the roll to market movements in any one particular day.

SECTION 2: DAILY INDEX CALCULATIONS

The Index is available in an Excess Return format.

An Excess Return Index represents the performance of a synthetic, unfunded exposure to the Contracts in an Index, that is, the Index tracks what an investor would receive if it purchased or sold the futures contracts underlying the Index without taking into consideration the cost of investment capital. On an Index Business Day, t , the Excess Return Index level, I_t , is calculated (rounded to the eight decimal points) based on the value of the Excess Return Index in the preceding Index Business Day, I_{t-1} , and the **Index Daily Return**, IDR_t , according to the formula:

$$I_t = I_{t-1} \times (1 + IDR_t).$$

The Index Daily Return, IDR_t , is determined according to the formula below:

$$IDR_t = \frac{\sum_{i=1}^n RW_{i,t-1} \times HRO_{i,t-1} \times CRO_{i,t} + (1 - RW_{i,t-1}) \times HRI_{i,t-1} \times CRI_{i,t}}{\sum_{i=1}^n RW_{i,t-1} \times HRO_{i,t-1} \times CRO_{i,t-1} + (1 - RW_{i,t-1}) \times HRI_{i,t-1} \times CRI_{i,t-1}} - 1$$

where:

$RW_{i,t-1}$ is the Roll Weight of Commodity i on the Index Business Day $t-1$ immediately preceding the Index Business Day t ;

$HRO_{i,t-1}$ is the Holding Rolling Out of Commodity i on the Index Business Day $t-1$ immediately preceding the Index Business Day t ;

$HRI_{i,t-1}$ is the Holding Rolling In of Commodity i on the Index Business Day $t-1$ immediately preceding the Index Business Day t ;

$CRO_{i,t}$ and $CRI_{i,t}$ are the Settlement Prices of the the Contract Rolling Out and the Contract Rolling In of Commodity i on the Index Business Day t , respectively; and

$CRO_{i,t-1}$ and $CRI_{i,t-1}$ are the Settlement Prices of the the Contract Rolling Out and the Contract Rolling In of Commodity i on the Index Business Day $t-1$ immediately preceding the Index Business Day t , respectively.

The Index Start Date for an Index as well as the Excess Return Index Level, which is the value of the Index Start Date, are specified in the relevant Index Specification.

For example, for the Macquarie Single Commodity Nearby Curve Spread Component WTI Crude Oil ER Index, the Daily Index Calculation in respect of February 9th 2004 is as follows:

- The immediately preceding Index Business Day is February 6
- The Contract Rolling out is the March 2004 WTI Crude Oil contract
- The Contract Rolling in is the April 2004 WTI Crude Oil contract
- The Roll Weight in respect of February 9th is 2/3
- The Holding Rolling Out and Holding Rolling In are equal to 1
- The Index Level in respect of February 6 is 98.18621524
- The prices for the Contract Rolling Out and the contract Rolling In are as follows:

	Contract Rolling Out	Contract Rolling In
6 th February 2004	32.48	31.74
9 th February 2004	32.83	32.03

- The calculation of the Index Daily Return is therefore:

$$\frac{32.83 \times 1 \times \frac{2}{3} + 32.03 \times 1 \times \frac{1}{3}}{32.48 \times 1 \times \frac{2}{3} + 31.74 \times 1 \times \frac{1}{3}} = 1.01023784901758$$

The Excess Return Index Level in respect of February 9 is therefore, 99.19143089.

SECTION 3: MARKET DISRUPTION EVENTS AND MATERIAL CHANGES TO THE FUTURES UNDERLYING AN INDEX

Each Macquarie Single Commodity Curve Spread Component Index is comprised of one or more futures contracts on a particular physical commodity. 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.

During a Roll Period, this is generally achieved by delaying any changes to the composition of each affected Index. On any other Index Business Day, given replication of an Index does not require trading of Contracts on such days, in the event that a price is not available for a Contract, a price will be appropriately substituted in order for the calculations in respect of a particular Index Business Day to take place.

With respect to the daily calculation of an Index, a “Market Disruption Event” means the occurrence of one or more of the following events, as determined by the Index Calculation Agent:

- (i) a material limitation, suspension, or disruption of trading in one (or more) of the Contracts underlying the Index which results in a failure by the relevant Trading Facility to report or announce a settlement price for such Contract on the day on which such event occurs or any succeeding day on which it continues to occur;
- (ii) the settlement price published by the relevant Trading Facility for one (or more) Contract underlying the Index 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;
- (iii) any other event, if the Index Calculation Agent reasonably determines that the event materially interferes with the ability of market participants to hedge the Index.

ROLL WEIGHT CALCULATION UNDER MARKET DISRUPTION EVENTS

When a Market Disruption Event occurs during a Roll Period, the approach taken by the Index Calculation Agent is to delay changes to the Index composition until the Market Disruption Event affecting the Index has concluded, provided that in the event that a Market Disruption Event continues for multiple days, the Index Calculation Agent will make a good faith determination in respect of the market price to be attributed to the affected Contracts.

If, on an Index Business Day during the Roll Period, t , a Market Disruption Event occurs, then the Commodity with an underlying Contract affected by the Market Disruption Event will have its roll postponed according to the following methodology:

- (i) For each Commodity i not affected by the Market Disruption Event, the Roll Weight, $RW_{i,t}$ is defined in the usual course, as in Section 2.
- (ii) For each Commodity i affected by the Market Disruption Event, the Roll Weight, $RW_{i,t}$, will be set equal its previous value, i.e., $RW_{i,t} = RW_{i,t-1}$.
- (iii) If the Roll Period falls in January, the Roll Weight on subsequent Index Business Days not affected by a Market Disruption Event will be determined without taking into account the Index Business Days on which a Market Disruption Event occurred or was continuing.

- (iv) If the Roll Period does not fall in January, the postponed portion of the roll in (ii) above will roll on the first Index Business Day not affected by Market Disruption Events.

In the event that the Roll Period ends without the Roll Weight being fully redistributed into the Contract Rolling In, then the Roll Period is extended until there is no Market Disruption Event. If the Roll Period is extended five (5) days, then the Index Calculation Agent will determine the Settlement Price in order to effect that portion of the roll. It is anticipated, however, that the Index Calculation Agent will only need to make such determination under extraordinary circumstances.

For example, if the WTI Crude Oil March 2004 contract was disrupted on February 9, 2004 and ceased to be disrupted the following day, on February 10, 2004, the calculation of roll weights for Macquarie Single Commodity Nearby Curve Spread Component WTI Crude Oil ER Index would be modified as follows:

- The Roll Weight of the Macquarie Single Commodity Nearby Curve Spread Component WTI Crude Oil ER Index in respect of February 9, 2014 would be equal to 1 instead of 2/3
- Since there would be no disruption in respect of February 10, 2004, the Roll Weight in respect of this date would be equal to 1/3
- The Roll Weights in respect of following Index Business Days were calculated according to Section 1 above

MATERIAL CHANGES TO THE FUTURES UNDERLYING AN INDEX

If, in respect of an Index:

- (i) The specifications of a Contract are altered by the relevant Trading Facility in such a way as to materially affect the ability of the Index to represent a financial investment in the underlying commodity of those futures; or
- (ii) Contracts with the appropriate underlying commodity are no longer traded on the relevant Trading Facility,

then the Index Sponsor may, with the approval of the Oversight Committee:

- (i) Alter the specification of the index in such a way as to ensure that the Index accurately represents a financial investment in the appropriate commodity; or
- (ii) Discontinue the Index.

CONTACTS

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APPENDIX A – INDEX SPECIFICATION TABLES

Appendix A may be supplemented from time to time by the addition of new Index Specification Tables.

Index Name	Macquarie Single Commodity Nearby Curve Spread Component Copper ER Index
Bloomberg Ticker	MQCP255E
Commodity	High Grade Copper
Trading Facility	COMEX
Static Contract Roll Schedule	H,H,K,K,N,N,U,U,Z,Z,H+,H+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component Copper ER Index
Bloomberg Ticker	MQCP237E
Commodity	High Grade Copper
Trading Facility	COMEX
Static Contract Roll Schedule	U,U,Z,Z,Z,H+,H+,H+,K+,K+,N+,N+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Nearby Curve Spread Component Nickel ER Index
Bloomberg Ticker	MQCP257E
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	H,H,K,K,N,N,U,U,X,X,F+,F+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100

Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component Nickel ER Index
Bloomberg Ticker	MQCP238E
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	U,U,X,X,F+,F+,H+,H+,K+,K+,N+,N+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Nearby Curve Spread Component Heating Oil ER Index
Bloomberg Ticker	MQCP239E
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	J,J,J,M,Q,U,U,U,Z,Z,G+,J+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component Heating Oil ER Index
Bloomberg Ticker	MQCP240E
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	M,M,M,N,V,X,X,X,F+,F+,J+,M+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100

Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Nearby Curve Spread Component Unleaded Gasoline ER Index
Bloomberg Ticker	MQCP241E
Commodity	Unleaded Gasoline
Trading Facility	NYMEX
Static Contract Roll Schedule	G,J,K,M,M,N,V,V,V,X,F+,F+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component Unleaded Gasoline ER Index
Bloomberg Ticker	MQCP242E
Commodity	Unleaded Gasoline
Trading Facility	NYMEX
Static Contract Roll Schedule	H,M,N,Q,U,U,Z,Z,Z,G+,H+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Nearby Curve Spread Component WTI Crude Oil ER Index
Bloomberg Ticker	MQCP254E
Commodity	WTI Crude Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	G,H,J,K,M,N,Q,U,V,X,Z,F+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5

Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component WTI Crude Oil ER Index
Bloomberg Ticker	MQCP243E
Commodity	WTI Crude Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	J,K,M,N,Q,U,V,X,Z,F+,G+,H+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Nearby Curve Spread Component Zinc ER Index
Bloomberg Ticker	MQCP258E
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	H,H,K,K,N,N,U,U,X,X,F+,F+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component Zinc ER Index
Bloomberg Ticker	MQCP244E
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	U,U,X,X,F+,F+,H+,H+,K+,K+,N+,N+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5

Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Nearby Curve Spread Component Aluminium ER Index
Bloomberg Ticker	MQCP256E
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	H,H,K,K,N,N,U,U,X,X,F+,F+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component Aluminium ER Index
Bloomberg Ticker	MQCP245E
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	U,U,X,X,F+,F+,H+,H+,K+,K+,N+,N+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Nearby Curve Spread Component Nat Gas ER Index
Bloomberg Ticker	MQCP246E
Commodity	Nat Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	G,K,K,K,M,N,Q,U,F+,F+,G+,G+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5

Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext

Index Name	Macquarie Single Commodity Deferred Curve Spread Component Nat Gas ER Index
Bloomberg Ticker	MQCP247E
Commodity	Nat Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	H,N,N,N,Q,U,V,X,H+,H+,H+,H+
Holding Rolling In	1
Holding Rolling Out	1
Roll Start Date	5
Roll Length	3
Start Level	100
Start Date	05-Feb-04
Index Calendar	NYSE Euronext