

# Macquarie Single Commodity Congestion Beta Indices

**May 2017**

## NOTES AND DISCLAIMERS

---

### BASIS OF PROVISION

---

This Index Manual sets out the rules for the Macquarie Single Commodity Congestion Beta 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, 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.

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.

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

## 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 Congestion Beta 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').

The most commonly traded commodity index products roll their contracts during five days (roll period) starting on the 5<sup>th</sup> business day of the month and ending on the 9<sup>th</sup> business days of the month. Trading (i.e. rolling) away from this standard roll period to avoid price pressure is the principle behind the congestion strategies underlying the Macquarie Single Commodity Congestion Beta Indices. Each Single Commodity Congestion Beta Index will calculate a proxy for commodity index flows and decide to (i) roll before the standard roll period if the proxy signal points to commodity index inflows or (ii) roll after the standard roll period if the proxy signal suggests there have been commodity index outflows over the past month.

Accordingly, the Macquarie Single Commodity Congestion Beta Indices, together, represent systematic and replicable benchmarks for investment in individual commodities with an optimized contract roll. The Indices aim to reduce the price impact from the hedging of the main commodity index benchmarks by rolling the contracts ahead of the market when more index money is expected to roll relative to the previous month, and roll after the market when less index money is expected to roll relative to the previous month.

## 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, the roll periods etc.). 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 a 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 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 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 how 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 Congestion Beta Indices. The Index Specifications serve as inputs to the index calculation section of the document, which describes the process of calculating each excess return 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 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 together with overseeing the daily management and operations of the Index.

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 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

---

**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 with which the upcoming Roll Period (relative to that particular Index Business Day) is associated. 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 with which the upcoming Roll Period (relative to that particular Index Business Day) is associated. 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.

The **First Notice Date** is established for each Contract by the relevant Trading Facility and is typically the first day on which notices of intent to deliver against futures market positions can be received.

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

**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.

**Intraday Price**, in respect of a Contract and an Index Business Day, is the average of the daily high and low prices of that Contract, as reported by the price source utilized by the Index Sponsor from time to time. Any corrections to high and low prices that are not reported prior to a Roll Selection Date will not be taken into account by the Index Sponsor when making Index calculations on that Roll Selection Date. For contracts listed on the London Metal Exchange (LME), it is common market practice to approximate the daily high/low prices by referencing the three month rolling forward contract, where most of the liquidity is concentrated, and the spread between the three month rolling forward settlement and the contract settlement on the previous day. We therefore define the daily high (low) price (used to calculate the Intraday Price) as the three month rolling forward high (low) plus the spread between the Settlement Price of the contract on the previous Index Business Day, which is also an LME business day, and the three month rolling forward Settlement Price on that same day.

**Mean Calculation Period**, in respect of an Index and each Roll Selection Date, is the period starting on, and including, the Index Business Day preceding the Roll Selection Date by 21 Index Business Days and ending on the Index Business Day immediately preceding the Roll Selection Date.

**Post-roll Start Date**, in respect of an Index, is one of two possible (the other being the Pre-Roll Start Date) values for the Roll Start Date and is specified in the relevant Index Specification.

**Pre-roll Start Date**, in respect of an Index, is one of two possible (the other being the Post-Roll Start Date) values for the Roll Start Date and is specified in the relevant Index Specification.

**Post-roll Length**, in respect of an Index, is one of two possible (the other being the Pre-Roll Length) values for the Roll Length and is specified in the relevant Index Specification.

**Pre-roll Length**, in respect of an Index, is one of two possible (the other being the Post-Roll Length) values for the Roll Length and is specified in the relevant Index Specification.

**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 Selection Date**, in respect of an Index and a calendar month, is the previous Index Business Day to the Pre-roll Start Date for that month. On this day, the Roll Start Date for that month is selected from the Pre-roll Start Date and the Post-roll Start Date, as described in Section 1.

**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 represented by a number denoting the Index Business Day that is the Roll Start Date in respect of each month and is selected on a monthly basis to equal the Pre-roll Start Date or the Post-roll Start Date, as described in Section 1. 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 5<sup>th</sup> 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 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. For the calculation of the Signal and the rolling of the Index, 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 which is also an Index Business Day.

**Signal**, in respect of an Index, is a number calculated as set out in Section 1 of this document that is utilized in the selection process of the Roll Start Date, as described in Section 1.

**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 ([https://treasurydirect.gov/TA\\_WS/securities/auctioned](https://treasurydirect.gov/TA_WS/securities/auctioned)).

---

## 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.

The most commonly traded commodity index products roll their contracts during five days (roll period) starting on the 5<sup>th</sup> business day of the month and ending on the 9<sup>th</sup> business days of the month. Each Index aims to trade (i.e. roll) away from this standard roll period to avoid price pressures during this period.

Each Index will calculate a Signal used to estimate commodity index flows and decide to (i) roll before the standard roll period (Pre-roll) if there is an expectation of commodity index inflows or (ii) roll after the standard roll period (Post-roll) if there is an expectation of commodity index outflows over the past month. The decision to Pre-roll or Post-roll is made one day before the Pre-roll Period (on the Roll Selection Date) and is described in Section 1.

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: SELECTING THE ROLL PERIOD

---

Each Index aims to reduce the price impact from the hedging of the commonly traded commodity indices by rolling the contracts ahead of the market when it is calculated that more index money is expected to roll relative to the previous month and roll after the market when less index money is expected to roll relative to the previous month. We describe this as “commodity index flows”.

On each Roll Selection Date, a proxy Signal for commodity index flows is calculated for each Index, as described below in the “Calculating the Signal” subsection. If the Signal is:

- (a) Greater than or equal to 1, then:
  - (i) The next Roll Start Date will be equal to the Pre-roll Start Date; and
  - (ii) The next Roll Length will be equal to Pre-roll Length.
- (b) Less than 1, then:
  - (i) The next Roll Start Date will be equal to the Post-roll Start Date; and
  - (ii) The next Roll Length will be equal to Post-roll Length.

---

### POST-ROLL START DATE ADJUSTMENT

---

The Post-roll Start Date can be brought forward under certain circumstances to avoid any exposure to the Contract Rolling Out past its First Notice Date (to avoid the risk of delivery) or past its Expiry Date. If the First Notice Date or the contract Expiry Date of the Contract Rolling Out is earlier than the last day of the (post) Roll Period, then the Post-roll Start Date is brought forward such that the Roll Period ends before the First Notice Date/Expiry Date of the Contract Rolling Out.

For example, the Macquarie Single Commodity Congestion Beta Cocoa type B F0 Index 0 had to bring the Post-roll Start Date forward by one day during February 2016, from 12 February 2016 to 11 February 2016, to avoid holding the Roll Out Contract (March 2016 Cocoa Contract) past its First Notice Date (16 February 2016). The Index thus rolled out of the March 2016 Cocoa Contract into the May 2016 Cocoa Contract on the February 11 and February 12 instead of February 12 and February 16.

---

## CALCULATING THE SIGNAL

---

Commonly traded commodity indices reference Settlement Prices. When new funds flow into commodity indices, the Settlement Prices tend to be bid up, relative to Intraday Prices. The proxy Signal for commodity index flows looks to capture the average outperformance of Settlement Prices relative to Intraday Prices over the past month.

In respect of each Roll Selection Date  $P$ , a proxy Signal for commodity index flows will be calculated as the geometric mean of daily returns of Settlement Prices over Intraday Prices for the Contracts underlying the most traded commodity indices throughout the Mean Calculation Period, as follows:

$$GM_P = \sqrt[n]{\prod_{i=1..n} DR_i}$$

Where:

$n$  is the total number of Index Business Days in the Mean Calculation Period

$i$  denotes the  $i$ -th Index Business Day in the Mean Calculation Period

$i-1$  denotes the Index Business Day immediately preceding the  $i$ -th Index Business Day in the Mean Calculation Period

$DR_i$  is the daily return of the Settlement Prices of the Contract Rolling Out and the Contract Rolling In over the Intraday Prices of the same Contracts on Index Business Day  $i$ :

$$DR_i = \frac{RW_{i-1} \times CRO_i + (1 - RW_{i-1}) \times CRI_i}{RW_{i-1} \times CROMID_i + (1 - RW_{i-1}) \times CRIMID_i}$$

$RW_{i-1}$  is the equivalent Roll Weight on the Index Business Day  $i-1$  immediately preceding the Index Business Day  $i$ ;

$CRO_i$  and  $CRI_i$  are the Settlement Prices of the Contract Rolling Out and the Contract Rolling In on the Index Business Day  $i$ , respectively;

$CROMID_i$  and  $CRIMID_i$  are the Intraday Prices of the the Contract Rolling Out and the Contract Rolling In on the Index Business Day  $i$ , respectively;

The Roll Weight, Contract Rolling Out and Contract Rolling In are defined in relation to the standard Roll Start Date (5<sup>th</sup> Index Business Day of the month) and standard Roll Length (5 days), to mirror the Contracts underlying the main commodity index benchmarks.

## WORKED EXAMPLES

### Example 1

This example illustrates the Roll Period Selection and the Signal calculation for the Macquarie Single Commodity Congestion Beta WTI Crude Oil type B F0 Index 0 for November 2016. The Contract Rolling Out is CLX16 and the Contract Rolling In is CLZ16. On the 20<sup>th</sup> of September 2016 (the 8<sup>th</sup> Index Business Day before the start of November), the Index calculates the Signal to decide whether to pre roll or to post roll the contract. The Signal calculation is highlighted below:

Date	Business Day	Days before next month	Contract Rolling Out					Contract Rolling In					$RW_{i-1}$	$DR_i$
			Contract	$CRO_i$	$CROMID_i$	Low	High	Contract	$CRI_i$	$CRIMID_i$	Low	High		
19/09/2016	12	-10	CLX16	43.86	44.18	43.66	44.7	CLZ16	44.56	44.9	44.39	45.41	100%	0.993
20/09/2016	13	-9	CLX16	44.05	43.825	43.06	44.59	CLZ16	44.70	44.49	43.77	45.21	100%	1.005
21/09/2016	14	-8	CLX16	45.34	45.075	44.5	45.65	CLZ16	45.90	45.645	45.1	46.19	100%	1.006
22/09/2016	15	-7	CLX16	46.32	46.02	45.52	46.52	CLZ16	46.88	46.56	46.07	47.05	100%	1.007
23/09/2016	16	-6	CLX16	44.48	45.385	44.22	46.55	CLZ16	45.07	45.98	44.82	47.13	100%	0.980
26/09/2016	17	-5	CLX16	45.93	45.315	44.43	46.2	CLZ16	46.49	45.89	45.01	46.76	100%	1.014
27/09/2016	18	-4	CLX16	44.67	45.075	44.19	45.96	CLZ16	45.24	45.64	44.76	46.51	100%	0.991
28/09/2016	19	-3	CLX16	47.05	45.9	44.35	47.45	CLZ16	47.65	46.49	44.94	48.04	100%	1.025
29/09/2016	20	-2	CLX16	47.83	47.46	46.6	48.32	CLZ16	48.40	48.03	47.16	48.9	100%	1.008
30/09/2016	21	-1	CLX16	48.24	47.67	47.04	48.3	CLZ16	48.82	48.25	47.61	48.88	100%	1.012
03/10/2016	1	-21	CLX16	48.81	48.4	47.78	49.02	CLZ16	49.40	48.98	48.35	49.6	100%	1.008
04/10/2016	2	-20	CLX16	48.69	48.76	48.26	49.26	CLZ16	49.30	49.35	48.85	49.85	100%	0.999
05/10/2016	3	-19	CLX16	49.83	49.535	49.1	49.97	CLZ16	50.38	50.10	49.68	50.52	100%	1.006
06/10/2016	4	-18	CLX16	50.44	49.98	49.33	50.63	CLZ16	50.98	50.52	49.87	51.17	100%	1.009
07/10/2016	5	-17	CLX16	49.81	50.07	49.4	50.74	CLZ16	50.38	50.63	49.96	51.3	100%	0.995
10/10/2016	6	-16	CLX16	51.35	50.375	49.15	51.6	CLZ16	51.87	50.94	49.71	52.16	80%	1.019
11/10/2016	7	-15	CLX16	50.79	50.965	50.39	51.54	CLZ16	51.24	51.45	50.88	52.01	60%	0.996
12/10/2016	8	-14	CLX16	50.18	50.53	49.89	51.17	CLZ16	50.64	50.98	50.36	51.6	40%	0.993
13/10/2016	9	-13	CLX16	50.44	49.975	49.36	50.59	CLZ16	50.85	50.39	49.79	50.99	20%	1.009
14/10/2016	10	-12	CLX16	50.35	50.52	49.9	51.14	CLZ16	50.75	50.91	50.3	51.51	0%	0.997
17/10/2016	11	-11	CLZ16	50.37	50.45	49.9	51	CLF17	50.91	50.995	50.46	51.53	100%	0.998
18/10/2016	12	-10	CLZ16	50.62	50.615	50.13	51.1	CLF17	51.14	51.13	50.68	51.58	100%	1.000
19/10/2016	13	-9	CLZ16	51.82	51.615	51.01	52.22	CLF17	52.28	52.11	51.53	52.68	100%	1.004
20/10/2016	14	-8	CLZ16	50.63	51.135	50.44	51.83	CLF17	51.14	51.61	50.94	52.28	100%	0.990

Mean Calculation Period

Signal

1.00357904

Roll Selection Date

As the Signal value is higher than 1, the Index Roll Start Date will be the Pre-roll Start Date and the Roll Length will be the Pre-roll Length for November 2016.

## Example 2

This examples illustrates the Roll Period Selection and the Signal calculation for the Macquarie Single Commodity Congestion Beta Aluminum type B F0 Index 0 in November 2016. Here, the Intraday Price is calculated differently due to LME idiosyncrasies where most of the liquidity is on the 3 Month Rolling Forward contract.

The LME high and low price calculation is highlighted below:

Date (T)	$CROMID_t$	$CRIMID_t$	3M RF High@T	3M RF Low@T	3M RF Settlement@T-1	Roll Out Close@T-1	Roll In Close@T-1	Prev Date (T-1)
19/09/2016	1572.25	1576.5	1584.5	1570	1575.5	1570.5	1574.75	16/09/2016
20/09/2016	1574.75	1579.5	1588	1573	1583	1577.25	1582	19/09/2016
21/09/2016	1575	1579.75	1587	1574	1577	1571.5	1576.25	20/09/2016
22/09/2016	1604.5	1609.25	1633	1585.5	1584	1579.25	1584	21/09/2016
23/09/2016	1637.5	1641.5	1652.5	1626	1633	1631.25	1635.25	22/09/2016
26/09/2016	1638.75	1643.75	1666	1618	1637	1633.75	1638.75	23/09/2016
27/09/2016	1652.25	1657.75	1673	1640.5	1661	1656.5	1662	26/09/2016
28/09/2016	1650.5	1656.25	1666.5	1643.5	1651	1646.5	1652.25	27/09/2016
29/09/2016	1660.75	1666.5	1674	1656.5	1665	1660.5	1666.25	28/09/2016
30/09/2016	1661.75	1667.5	1675	1657	1671	1666.75	1672.5	29/09/2016
03/10/2016	1664	1669.75	1679	1657.5	1673	1668.75	1674.5	30/09/2016
04/10/2016	1667	1672.75	1679.5	1666	1678	1672.25	1678	03/10/2016
05/10/2016	1665	1670	1678	1661.5	1669	1664.25	1669.25	04/10/2016
06/10/2016	1667.75	1672.75	1680	1665	1675	1670.25	1675.25	05/10/2016
07/10/2016	1673	1678	1682.5	1672.5	1677	1672.5	1677.5	06/10/2016
10/10/2016	1676.5	1681.5	1691	1671	1675	1670.5	1675.5	07/10/2016
11/10/2016	1673	1677.5	1693	1665	1690.5	1684.5	1689	10/10/2016



12/10/2016	1674.5	1678.75	1690	1671	1679	1673	1677.25	11/10/2016
13/10/2016	1678.75	1683	1694.5	1675.5	1685	1678.75	1683	12/10/2016
14/10/2016	1674.75	1678.5	1694.5	1667	1692	1686	1689.75	13/10/2016
17/10/2016	1657.5	1660.5	1674	1647	1675	1672	1675	14/10/2016
18/10/2016	1656	1659.5	1682	1637	1660.5	1657	1660.5	17/10/2016
19/10/2016	1633.5	1637.25	1654.5	1620	1642	1638.25	1642	18/10/2016
20/10/2016	1619.5	1622.25	1636	1608	1631.5	1629	1631.75	19/10/2016

3M RF High@T Three month rolling forward high price

3M RF Low@T Three month rolling forward low price

3M RF Settlement@T-1 Three month rolling forward settlement price on the previous index business day that is also an LME business day

Roll Out Close@T-1 Roll out contract settlement price on the previous index business day that is also an LME business day

Roll In Close@T-1 Roll in contract settlement price on the previous index business day that is also an LME business day

Prev Date (T-1) The previous index business day that is also an LME business day

The index decides on the 20<sup>th</sup> of October whether to pre roll or post roll the underlying contract. For November 2016, the Contract Rolling Out is LAZ16, the Contract Rolling In is LAF17. The Signal calculation is highlighted below:

Date	Business Day	Days before next month	Contract Rolling Out			Contract Rolling In			$RW_{i-1}$	$DR_i$
			Contract	$CRO_i$	$CROMID_i$	Contract	$CRI_i$	$CRIMID_i$		
01/09/2016	1	-21	LAV16	1605.75	1602.5	LAX16	1611	1607.5	100%	1.0020
02/09/2016	2	-20	LAV16	1584.75	1597.25	LAX16	1590	1602.5	100%	0.9922
06/09/2016	3	-19	LAV16	1580.25	1577.25	LAX16	1585	1582.5	100%	1.0019
07/09/2016	4	-18	LAV16	1584	1588.75	LAX16	1588.75	1593.5	100%	0.9970
08/09/2016	5	-17	LAV16	1581	1579.5	LAX16	1586.25	1584.25	100%	1.0009
09/09/2016	6	-16	LAV16	1567.75	1574.5	LAX16	1573.5	1579.75	80%	0.9958
12/09/2016	7	-15	LAV16	1557	1560.25	LAX16	1562.5	1566	60%	0.9979
13/09/2016	8	-14	LAV16	1554.25	1557.75	LAX16	1559.5	1563.25	40%	0.9977
14/09/2016	9	-13	LAV16	1574.25	1565	LAX16	1579.5	1570.25	20%	1.0059
15/09/2016	10	-12	LAV16	1561.75	1568.5	LAX16	1566.5	1573.75	0%	0.9954
16/09/2016	11	-11	LAX16	1570.5	1572.5	LAZ16	1574.75	1577	100%	0.9987
19/09/2016	12	-10	LAX16	1577.25	1572.25	LAZ16	1582	1576.5	100%	1.0032
20/09/2016	13	-9	LAX16	1571.5	1574.75	LAZ16	1576.25	1579.5	100%	0.9979

21/09/2016	14	-8	LAX16	1579.25	1575	LAZ16	1584	1579.75	100%	1.0027
22/09/2016	15	-7	LAX16	1631.25	1604.5	LAZ16	1635.25	1609.25	100%	1.0167
23/09/2016	16	-6	LAX16	1633.75	1637.5	LAZ16	1638.75	1641.5	100%	0.9977
26/09/2016	17	-5	LAX16	1656.5	1638.75	LAZ16	1662	1643.75	100%	1.0108
27/09/2016	18	-4	LAX16	1646.5	1652.25	LAZ16	1652.25	1657.75	100%	0.9965
28/09/2016	19	-3	LAX16	1660.5	1650.5	LAZ16	1666.25	1656.25	100%	1.0061
29/09/2016	20	-2	LAX16	1666.75	1660.75	LAZ16	1672.5	1666.5	100%	1.0036
30/09/2016	21	-1	LAX16	1668.75	1661.75	LAZ16	1674.5	1667.5	100%	1.0042
03/10/2016	1	-21	LAX16	1672.25	1664	LAZ16	1678	1669.75	100%	1.0050
04/10/2016	2	-20	LAX16	1664.25	1667	LAZ16	1669.25	1672.75	100%	0.9984
05/10/2016	3	-19	LAX16	1670.25	1665	LAZ16	1675.25	1670	100%	1.0032
06/10/2016	4	-18	LAX16	1672.5	1667.75	LAZ16	1677.5	1672.75	100%	1.0028
07/10/2016	5	-17	LAX16	1670.5	1673	LAZ16	1675.5	1678	100%	0.9985
10/10/2016	6	-16	LAX16	1684.5	1676.5	LAZ16	1689	1681.5	80%	1.0047
11/10/2016	7	-15	LAX16	1673	1673	LAZ16	1677.25	1677.5	60%	0.9999
12/10/2016	8	-14	LAX16	1678.75	1674.5	LAZ16	1683	1678.75	40%	1.0025
13/10/2016	9	-13	LAX16	1686	1678.75	LAZ16	1689.75	1683	20%	1.0041
14/10/2016	10	-12	LAX16	1668	1674.75	LAZ16	1672	1678.5	0%	0.9961
17/10/2016	11	-11	LAZ16	1657	1657.5	LAF17	1660.5	1660.5	100%	0.9997
18/10/2016	12	-10	LAZ16	1638.25	1656	LAF17	1642	1659.5	100%	0.9893
19/10/2016	13	-9	LAZ16	1629	1633.5	LAF17	1631.75	1637.25	100%	0.9972
20/10/2016	14	-8	LAZ16	1609.5	1619.5	LAF17	1612.25	1622.25	100%	0.9938

Mean Calculation Period

Signal

1.0018771

Roll Selection Date

As the Signal value for November 2016 is higher than 1, the Index Roll Start Date will be the Pre-roll Start Date and the Roll Length will be the Pre-roll Length for November 2016.

## SECTION 2: 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 the Contracts 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 on Index Business Day  $t$ ,  $RW_t$ , is equal to one (1) if the Index Business Day,  $t$ , is outside a Roll Period.
- (ii) The Roll Weight on Index Business Day  $t$ ,  $RW_t$ , will decrease by the amount defined by the Roll Fraction on each day of the Roll Period. That is,  $RW_t = RW_{t-1} - \text{Roll Fraction}$  for each Index Business Day  $t$  belonging to the Roll Period until  $RW_t$  is equal to zero at the end of the Roll Period.
- (iii) If a Market Disruption Event occurs, then each Contract will have its roll postponed as described in Section 4.

For example, the Macquarie Single Commodity Congestion Beta WTI Crude Oil type B F0 Index 0 has two possible Roll Periods to roll the underlying WTI Crude Oil Contract based on the value of the Signal. In October 2016, the Contract Rolling Out is the November 2016 Contract (CLX16) and the Contract Rolling In is the December 2016 Contract (CLZ16). The roll process for October 2016 is described below:

- On 21<sup>st</sup> of September 2016 (the Roll Selection Date), 8 Index Business days before the month of October starts, the Roll Period Selection process described in Section 1 indicates whether the underlying contract should pre roll or post roll.
- If the decision is to pre roll (Roll Start Date is the Pre-roll Start Date and Roll Length is the Pre-roll Length), then the Index will roll out of the CLX16 Contract into the CLZ16 Contract over the 22<sup>nd</sup> of September 2016 (7<sup>th</sup> business day before the start of the month), the 23<sup>rd</sup> of September 2016 (6<sup>th</sup> Business Day before the start of the month) and the 26<sup>th</sup> of September (5<sup>th</sup> business day before the start of the month). On each day, the Index rolls out a third of the CLX16 Contract exposure through the use of the Roll Weight.
- If the decision is to post roll (Roll Start Date is the Post-roll Start Date and Roll Length is the Post-roll Length), then the Index will roll out of the CLX16 Contract into the CLZ16 Contract over the 14<sup>th</sup> of October 2016 (10<sup>th</sup> business day of October 2016) and the 17<sup>th</sup> of October 2016 (11<sup>th</sup> Business Day of October 2016). On each day, the Index rolls out half of the exposure in the CLX16 contract.

TABLE 1: PRE-ROLL START DATE/PRE-ROLL LENGTH SELECTION

Date	Business Day	Days before new month	Contracts		Roll Weight	
			<i>Contract Rolling Out</i>	<i>Contract Rolling In</i>	$RW_t$	$1-RW_t$
01/09/2016	1	-21	CLX16	CLZ16	100%	0%
02/09/2016	2	-20	CLX16	CLZ16	100%	0%
06/09/2016	3	-19	CLX16	CLZ16	100%	0%
07/09/2016	4	-18	CLX16	CLZ16	100%	0%
08/09/2016	5	-17	CLX16	CLZ16	100%	0%
09/09/2016	6	-16	CLX16	CLZ16	100%	0%
12/09/2016	7	-15	CLX16	CLZ16	100%	0%
13/09/2016	8	-14	CLX16	CLZ16	100%	0%
14/09/2016	9	-13	CLX16	CLZ16	100%	0%
15/09/2016	10	-12	CLX16	CLZ16	100%	0%
16/09/2016	11	-11	CLX16	CLZ16	100%	0%
19/09/2016	12	-10	CLX16	CLZ16	100%	0%
20/09/2016	13	-9	CLX16	CLZ16	100%	0%
21/09/2016	14	-8	CLX16	CLZ16	100%	0%
22/09/2016	15	-7	CLX16	CLZ16	67%	33%
23/09/2016	16	-6	CLX16	CLZ16	33%	67%
26/09/2016	17	-5	CLX16	CLZ16	0%	100%
27/09/2016	18	-4	CLZ16	CLF17	100%	0%
28/09/2016	19	-3	CLZ16	CLF17	100%	0%
29/09/2016	20	-2	CLZ16	CLF17	100%	0%
30/09/2016	21	-1	CLZ16	CLF17	100%	0%
03/10/2016	1	-22	CLZ16	CLF17	100%	0%
04/10/2016	2	-21	CLZ16	CLF17	100%	0%
05/10/2016	3	-20	CLZ16	CLF17	100%	0%
06/10/2016	4	-19	CLZ16	CLF17	100%	0%
07/10/2016	5	-18	CLZ16	CLF17	100%	0%
10/10/2016	6	-17	CLZ16	CLF17	100%	0%
11/10/2016	7	-16	CLZ16	CLF17	100%	0%
12/10/2016	8	-15	CLZ16	CLF17	100%	0%
13/10/2016	9	-14	CLZ16	CLF17	100%	0%
14/10/2016	10	-13	CLZ16	CLF17	100%	0%
17/10/2016	11	-12	CLZ16	CLF17	100%	0%
18/10/2016	12	-11	CLZ16	CLF17	100%	0%
19/10/2016	13	-10	CLZ16	CLF17	100%	0%
20/10/2016	14	-9	CLZ16	CLF17	100%	0%

*Roll Selection Date*  
*Roll Period (Pre-roll)*  
*Roll Period (Pre-roll)*  
*Roll Period (Pre-roll)*

TABLE 2: POST-ROLL START DATE/POST-ROLL LENGTH SELECTION

Date	Business Day	Days before new month	Contracts		Roll Weight	
			<i>Contract Rolling Out</i>	<i>Contract Rolling In</i>	$RW_t$	$1-RW_t$
01/09/2016	1	-21	CLX16	CLZ16	100%	0%
02/09/2016	2	-20	CLX16	CLZ16	100%	0%
06/09/2016	3	-19	CLX16	CLZ16	100%	0%
07/09/2016	4	-18	CLX16	CLZ16	100%	0%
08/09/2016	5	-17	CLX16	CLZ16	100%	0%
09/09/2016	6	-16	CLX16	CLZ16	100%	0%
12/09/2016	7	-15	CLX16	CLZ16	100%	0%
13/09/2016	8	-14	CLX16	CLZ16	100%	0%
14/09/2016	9	-13	CLX16	CLZ16	100%	0%
15/09/2016	10	-12	CLX16	CLZ16	100%	0%
16/09/2016	11	-11	CLX16	CLZ16	100%	0%
19/09/2016	12	-10	CLX16	CLZ16	100%	0%
20/09/2016	13	-9	CLX16	CLZ16	100%	0%
21/09/2016	14	-8	CLX16	CLZ16	100%	0%
22/09/2016	15	-7	CLX16	CLZ16	100%	0%
23/09/2016	16	-6	CLX16	CLZ16	100%	0%
26/09/2016	17	-5	CLX16	CLZ16	100%	0%
27/09/2016	18	-4	CLX16	CLZ16	100%	0%
28/09/2016	19	-3	CLX16	CLZ16	100%	0%
29/09/2016	20	-2	CLX16	CLZ16	100%	0%
30/09/2016	21	-1	CLX16	CLZ16	100%	0%
03/10/2016	1	-22	CLX16	CLZ16	100%	0%
04/10/2016	2	-21	CLX16	CLZ16	100%	0%
05/10/2016	3	-20	CLX16	CLZ16	100%	0%
06/10/2016	4	-19	CLX16	CLZ16	100%	0%
07/10/2016	5	-18	CLX16	CLZ16	100%	0%
10/10/2016	6	-17	CLX16	CLZ16	100%	0%
11/10/2016	7	-16	CLX16	CLZ16	100%	0%
12/10/2016	8	-15	CLX16	CLZ16	100%	0%
13/10/2016	9	-14	CLX16	CLZ16	100%	0%
14/10/2016	10	-13	CLX16	CLZ16	50%	50%
17/10/2016	11	-12	CLX16	CLZ16	0%	100%
18/10/2016	12	-11	CLZ16	CLF17	100%	0%
19/10/2016	13	-10	CLZ16	CLF17	100%	0%
20/10/2016	14	-9	CLZ16	CLF17	100%	0%

Roll Selection Date

Roll Period (Post-roll)

Roll Period (Post-roll)

### SECTION 3: DAILY INDEX CALCULATIONS

The Index is available in an excess return format. The (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 Index Level,  $I_t$ , is calculated (rounded to the eight decimal points) based on the value of the 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:

$$IDR_t = \frac{RW_{t-1} \times CRO_t + (1 - RW_{t-1}) \times CRI_t}{RW_{t-1} \times CRO_{t-1} + (1 - RW_{t-1}) \times CRI_{t-1}} - 1$$

where:

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

$CRO_t$  and  $CRI_t$  are the Settlement Prices of the the Contract Rolling Out and the Contract Rolling In on the Index Business Day  $t$ , respectively; and

$CRO_{t-1}$  and  $CRI_{t-1}$  are the Settlement Prices of the the Contract Rolling Out and the Contract Rolling In 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 Index Level, which is the value of the Index Start Date, are specified in the relevant Index Specification.

For example, for Macquarie Single Commodity Congestion Beta WTI Crude Oil type B F0 Index 0 (DYSCCLF0E), the Daily Index Calculation in respect of 25<sup>th</sup> of October 2016 is as follows:

- The immediately preceding Index Business Day is October 24
- The Contract Rolling out is the December 2016 WTI Crude Oil contract (CLZ16)
- The Contract Rolling in is the January 2017 WTI Crude Oil contract (CLF17)
- The Roll Weight in respect of October 24 is  $\frac{2}{3}$
- The Index Level in respect of October 24 is 35.38834824
- The prices for the Contract Rolling Out and the contract Rolling In are as follows:

	Contract Rolling Out	Contract Rolling In
24 <sup>th</sup> October 2016	50.52	51.16
25 <sup>th</sup> October 2016	49.96	50.6

- The calculation of the Index Daily Return is therefore:

$$\frac{49.96 \times \frac{2}{3} + 50.6 \times \frac{1}{3}}{50.52 \times \frac{2}{3} + 51.16 \times \frac{1}{3}} = 0.9890081131$$

The Index Level in respect of October 25 is therefore, 34.99936352.

#### SECTION 4: MARKET DISRUPTION EVENTS AND MATERIAL CHANGES TO THE FUTURES UNDERLYING AN INDEX

---

Each 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 determination in good faith with respect to 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) The Roll Weight,  $RW_{i,t}$ , will be set equal its previous value, i.e.,  $RW_t = RW_{t-1}$ .
- (ii) 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, on the March 10, 2014, the price for the Lean Hogs April 2014 contract was a limit price, triggering a disruption under clause (i) of Section 4. This disruption ceased to exist on the March 11, 2014. Therefore, the calculation of roll weights was modified as follows:

- The Roll Weight of the Macquarie Single Commodity Lean Hogs Index (type A) in respect of March 10, 2014 was equal to 0.2 instead of 0.4
- Since there was no Market Disruption in respect of March 11, 2014, the Roll Weight in respect of this date was equal to 0.6
- The Roll Weights in respect of following Index Business Days were calculated according to Section 2 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 in the Trading Facility corresponding to an Index,

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.



## APPENDIX A – INDEX SPECIFICATION TABLES

Index Name	Macquarie Single Commodity Congestion Beta Cocoa type B F0 Index 0
Ticker	DYSCCCF0ER
Commodity	Cocoa
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNUUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Corn type B F0 Index 0
Ticker	DYSCCF0ER
Commodity	Corn
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta WTI Crude Oil type B F0 Index 0
Ticker	DYSCCLF0ER
Commodity	WTI Crude Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Brent Crude Oil type B F0 Index 0
Ticker	DYSCCOF0ER

Commodity	Brent Crude Oil
Trading Facility	ICE
Static Contract Roll Schedule	HJKMNQVXZF+G+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cotton type B F0 Index 0
Ticker	DYSCCTFOER
Commodity	Cotton
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNZZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Feeder Cattle type B F0 Index 0
Ticker	DYSCFCFOER
Commodity	Feeder Cattle
Trading Facility	CME
Static Contract Roll Schedule	HHJKQQQUVXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Heating Oil type B F0 Index 0
Ticker	DYSCHOFOER
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2

Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Coffee type B F0 Index 0
Ticker	DYSCKCF0ER
Commodity	Coffee
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNUUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Kansas) type B F0 Index 0
Ticker	DYSCKWFOER
Commodity	Wheat (Kansas)
Trading Facility	KCBOT
Static Contract Roll Schedule	HHKKNNUUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Aluminium type B F0 Index 0
Ticker	DYSCLAFOER
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Live Cattle type B F0 Index 0
Ticker	DYSCLCF0ER
Commodity	Live Cattle

Trading Facility	CME
Static Contract Roll Schedule	GJJMMQQVVZZG+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lean Hogs type B F0 Index 0
Ticker	DYSLHF0ER
Commodity	Lean Hogs
Trading Facility	CME
Static Contract Roll Schedule	GJJMMNQVVZZG+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lead type B F0 Index 0
Ticker	DYSLLF0ER
Commodity	Lead
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Nickel type B F0 Index 0
Ticker	DYSLNF0ER
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100

Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Copper type B F0 Index 0
Ticker	DYSCLPFOER
Commodity	Copper
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Zinc type B F0 Index 0
Ticker	DYSC LXFOER
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Natural Gas type B F0 Index 0
Ticker	DYSCNGFOER
Commodity	Natural Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Gas Oil type B F0 Index 0
Ticker	DYSCQSF0ER
Commodity	Gas Oil
Trading Facility	ICE

Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Sugar type B F0 Index 0
Ticker	DYSCSBFOER
Commodity	Sugar
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNVVVH+H+H+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybeans type B F0 Index 0
Ticker	DYSCSF0ER
Commodity	Soybeans
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNXXXXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Chicago) type B F0 Index 0
Ticker	DYSCWFOER
Commodity	Wheat (Chicago)
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUUZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003

Index Calendar	NYMEX
----------------	-------

Index Name	Macquarie Single Commodity Congestion Beta Unleaded Gasoline (RBOB) type B F0 Index 0
Ticker	DYSCRBFOER
Commodity	Unleaded Gasoline (RBOB)
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybean Oil type A F0 Index 0
Ticker	DYSDBOFOER
Commodity	Soybean Oil
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNZZZF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Corn type A F0 Index 0
Ticker	DYSDCF0ER
Commodity	Corn
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta WTI Crude Oil type A F0 Index 0
Ticker	DYSDCLFOER
Commodity	WTI Crude Oil
Trading Facility	NYMEX

Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Brent Crude Oil type A F0 Index 0
Ticker	DYSDCOF0ER
Commodity	Brent Crude Oil
Trading Facility	ICE
Static Contract Roll Schedule	HHKKNNUXXF+F+H+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cotton type A F0 Index 0
Ticker	DYSDCTF0ER
Commodity	Cotton
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNZZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta High Grade Copper type A F0 Index 0
Ticker	DYSDHGF0ER
Commodity	High Grade Copper
Trading Facility	COMEX
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003



Index Calendar	NYMEX
----------------	-------

Index Name	Macquarie Single Commodity Congestion Beta Heating Oil type A F0 Index 0
Ticker	DYSDHOF0ER
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	HHKKNNUUXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Coffee type A F0 Index 0
Ticker	DYSDKCF0ER
Commodity	Coffee
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Kansas) type A F0 Index 0
Ticker	DYSDKWFOER
Commodity	Wheat (Kansas)
Trading Facility	KCBOT
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Aluminium type A F0 Index 0
Ticker	DYSDLAF0ER
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	HHKKNNUUXF+F+

Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Live Cattle type A F0 Index 0
Ticker	DYSDLCFOER
Commodity	Live Cattle
Trading Facility	CME
Static Contract Roll Schedule	GJJMMQVVZZG+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lean Hogs type A F0 Index 0
Ticker	DYSDLHFOER
Commodity	Lean Hogs
Trading Facility	CME
Static Contract Roll Schedule	GJJMMNQVVZZG+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Nickel type A F0 Index 0
Ticker	DYSDLNFOER
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Zinc type A F0 Index 0
Ticker	DYSDLXFOER
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Natural Gas type A F0 Index 0
Ticker	DYSDNGFOER
Commodity	Natural Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Sugar type A F0 Index 0
Ticker	DYDSBFOER
Commodity	Sugar
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNVVVH+H+H+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybeans type A F0 Index 0
Ticker	DYDSFOER
Commodity	Soybeans
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNXXXXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10

Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybean Meal type A F0 Index 0
Ticker	DYSDSMFOER
Commodity	Soybean Meal
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNZZZF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Chicago) type A F0 Index 0
Ticker	DYSDWFOER
Commodity	Wheat (Chicago)
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Unleaded Gasoline (RBOB) type A F0 Index 0
Ticker	DYSDRBF0ER
Commodity	Unleaded Gasoline (RBOB)
Trading Facility	NYMEX
Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Gold type A F0 Index 0
------------	---

Ticker	DYSDGCF0ER
Commodity	Gold
Trading Facility	COMEX
Static Contract Roll Schedule	GJJMMQZZZZG+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Gold type B F0 Index 0
Ticker	DYSCGCF0ER
Commodity	Gold
Trading Facility	COMEX
Static Contract Roll Schedule	GJJMMQZZZZG+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Silver type A F0 Index 0
Ticker	DYSDSIF0ER
Commodity	Silver
Trading Facility	COMEX
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Silver type B F0 Index 0
Ticker	DYSCSIF0ER
Commodity	Silver
Trading Facility	COMEX
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3

Post-roll Length	2
Start Level	100
Start Date	31 December 2003
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cocoa type B F3 Index 0
Ticker	DYSCCCF3ER
Commodity	Cocoa
Trading Facility	NYBOT
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Corn type B F3 Index 0
Ticker	DYSCCF3ER
Commodity	Corn
Trading Facility	CBOT
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta WTI Crude Oil type B F3 Index 0
Ticker	DYSCCLF3ER
Commodity	WTI Crude Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	KMNQVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Brent Crude Oil type B F3 Index 0
Ticker	DYSCCOF3ER

Commodity	Brent Crude Oil
Trading Facility	ICE
Static Contract Roll Schedule	MNQUVXZF+G+H+J+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cotton type B F3 Index 0
Ticker	DYSCCTF3ER
Commodity	Cotton
Trading Facility	NYBOT
Static Contract Roll Schedule	KNNZZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Feeder Cattle type B F3 Index 0
Ticker	DYSCFCF3ER
Commodity	Feeder Cattle
Trading Facility	CME
Static Contract Roll Schedule	KQQQUVXF+F+H+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Heating Oil type B F3 Index 0
Ticker	DYSCHOF3ER
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2

Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Coffee type B F3 Index 0
Ticker	DYSCKCF3ER
Commodity	Coffee
Trading Facility	NYBOT
Static Contract Roll Schedule	KNNUUZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Kansas) type B F3 Index 0
Ticker	DYSCKWF3ER
Commodity	Wheat (Kansas)
Trading Facility	KCBOT
Static Contract Roll Schedule	KNNUUZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Aluminium type B F3 Index 0
Ticker	DYSCLAF3ER
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Live Cattle type B F3 Index 0
Ticker	DYSCLCF3ER
Commodity	Live Cattle



Trading Facility	CME
Static Contract Roll Schedule	MMQQVVZZG+G+J+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lean Hogs type B F3 Index 0
Ticker	DYSLHF3ER
Commodity	Lean Hogs
Trading Facility	CME
Static Contract Roll Schedule	MMNQVVZZG+G+J+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lead type B F3 Index 0
Ticker	DYSLLF3ER
Commodity	Lead
Trading Facility	LME
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Nickel type B F3 Index 0
Ticker	DYSLNF3ER
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100

Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Copper type B F3 Index 0
Ticker	DYSCLPF3ER
Commodity	Copper
Trading Facility	LME
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Zinc type B F3 Index 0
Ticker	DYSCLXF3ER
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Natural Gas type B F3 Index 0
Ticker	DYSCNGF3ER
Commodity	Natural Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Gas Oil type B F3 Index 0
Ticker	DYSCQSF3ER
Commodity	Gas Oil
Trading Facility	ICE

Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Sugar type B F3 Index 0
Ticker	DYSCSBF3ER
Commodity	Sugar
Trading Facility	NYBOT
Static Contract Roll Schedule	KNNVVVH+H+H+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybeans type B F3 Index 0
Ticker	DYSCSF3ER
Commodity	Soybeans
Trading Facility	CBOT
Static Contract Roll Schedule	KNNXXXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Chicago) type B F3 Index 0
Ticker	DYSCWF3ER
Commodity	Wheat (Chicago)
Trading Facility	CBOT
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012

Index Calendar	NYMEX
----------------	-------

Index Name	Macquarie Single Commodity Congestion Beta Unleaded Gasoline (RBOB) type B F3 Index 0
Ticker	DYSCRBF3ER
Commodity	Unleaded Gasoline (RBOB)
Trading Facility	NYMEX
Static Contract Roll Schedule	KMNQUVXZF+G+H+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybean Oil type A F3 Index 0
Ticker	DYSDBOF3ER
Commodity	Soybean Oil
Trading Facility	CBOT
Static Contract Roll Schedule	KNNZZZF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Corn type A F3 Index 0
Ticker	DYSDCF3ER
Commodity	Corn
Trading Facility	CBOT
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta WTI Crude Oil type A F3 Index 0
Ticker	DYSDCLF3ER
Commodity	WTI Crude Oil
Trading Facility	NYMEX

Static Contract Roll Schedule	KNNUXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Brent Crude Oil type A F3 Index 0
Ticker	DYSDCOF3ER
Commodity	Brent Crude Oil
Trading Facility	ICE
Static Contract Roll Schedule	NNUXXF+F+H+H+K+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cotton type A F3 Index 0
Ticker	DYSDCTF3ER
Commodity	Cotton
Trading Facility	NYBOT
Static Contract Roll Schedule	KNNZZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta High Grade Copper type A F3 Index 0
Ticker	DYSDHGF3ER
Commodity	High Grade Copper
Trading Facility	COMEX
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012

Index Calendar	NYMEX
----------------	-------

Index Name	Macquarie Single Commodity Congestion Beta Heating Oil type A F3 Index 0
Ticker	DYSDHOF3ER
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	KNNUUXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Coffee type A F3 Index 0
Ticker	DYSDKCF3ER
Commodity	Coffee
Trading Facility	NYBOT
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Kansas) type A F3 Index 0
Ticker	DYSDKWF3ER
Commodity	Wheat (Kansas)
Trading Facility	KCBOT
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Aluminium type A F3 Index 0
Ticker	DYSDLAF3ER
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	KNNUUXXF+F+H+H+K+

Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Live Cattle type A F3 Index 0
Ticker	DYSDLCF3ER
Commodity	Live Cattle
Trading Facility	CME
Static Contract Roll Schedule	MMQQVVZZG+G+J+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lean Hogs type A F3 Index 0
Ticker	DYSDLHF3ER
Commodity	Lean Hogs
Trading Facility	CME
Static Contract Roll Schedule	MMNQVVZZG+G+J+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Nickel type A F3 Index 0
Ticker	DYSDLNF3ER
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	KNNUXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Zinc type A F3 Index 0
Ticker	DYSDLXF3ER
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	KNNUXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Natural Gas type A F3 Index 0
Ticker	DYSDNGF3ER
Commodity	Natural Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	KNNUXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Sugar type A F3 Index 0
Ticker	DYDSBF3ER
Commodity	Sugar
Trading Facility	NYBOT
Static Contract Roll Schedule	KNNVVH+H+H+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybeans type A F3 Index 0
Ticker	DYDSF3ER
Commodity	Soybeans
Trading Facility	CBOT
Static Contract Roll Schedule	KNNXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10



Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybean Meal type A F3 Index 0
Ticker	DYSDSMF3ER
Commodity	Soybean Meal
Trading Facility	CBOT
Static Contract Roll Schedule	KNNZZZF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Chicago) type A F3 Index 0
Ticker	DYSDWF3ER
Commodity	Wheat (Chicago)
Trading Facility	CBOT
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Unleaded Gasoline (RBOB) type A F3 Index 0
Ticker	DYSDRBF3ER
Commodity	Unleaded Gasoline (RBOB)
Trading Facility	NYMEX
Static Contract Roll Schedule	KNNUXXF+F+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Gold type A F3 Index 0
------------	---

Ticker	DYSDGCF3ER
Commodity	Gold
Trading Facility	COMEX
Static Contract Roll Schedule	MMQQZZZG+G+J+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Gold type B F3 Index 0
Ticker	DYSCGCF3ER
Commodity	Gold
Trading Facility	COMEX
Static Contract Roll Schedule	MMQQZZZG+G+J+J+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Silver type A F3 Index 0
Ticker	DYSDSIF3ER
Commodity	Silver
Trading Facility	COMEX
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Silver type B F3 Index 0
Ticker	DYSCSIF3ER
Commodity	Silver
Trading Facility	COMEX
Static Contract Roll Schedule	KNNUZZZH+H+H+K+
Pre-roll Start Date	-7
Post-roll Start Date	10
Pre-roll Length	3

Post-roll Length	2
Start Level	100
Start Date	18 May 2012
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cocoa type B F0 Index 1
Ticker	MQDC1CC0
Commodity	Cocoa
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNUUZZH+
Pre-roll Start Date	-4
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Corn type B F0 Index 1
Ticker	MQDC1C0
Commodity	Corn
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUUZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta WTI Crude Oil type B F0 Index 1
Ticker	MQDC1CLO
Commodity	WTI Crude Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Brent Crude Oil type B F0 Index 1
Ticker	MQDC1CO0

Commodity	Brent Crude Oil
Trading Facility	ICE
Static Contract Roll Schedule	HJKMNQUVXZF+G+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cotton type B F0 Index 1
Ticker	MQDC1CT0
Commodity	Cotton
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNZZZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Feeder Cattle type B F0 Index 1
Ticker	MQDC1FC0
Commodity	Feeder Cattle
Trading Facility	CME
Static Contract Roll Schedule	HHJKQQQUVXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	24 December 2002
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Heating Oil type B F0 Index 1
Ticker	MQDC1HO0
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2

Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Coffee type B F0 Index 1
Ticker	MQDC1KC0
Commodity	Coffee
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNUUZZZH+
Pre-roll Start Date	-4
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Kansas) type B F0 Index 1
Ticker	MQDC1KW0
Commodity	Wheat (Kansas)
Trading Facility	KCBOT
Static Contract Roll Schedule	HHKKNNUUZZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	25 January 2002
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Aluminium type B F0 Index 1
Ticker	MQDC1LA0
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Live Cattle type B F0 Index 1
Ticker	MQDC1LC0
Commodity	Live Cattle

Trading Facility	CME
Static Contract Roll Schedule	GJJMMQQVVZZG+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lean Hogs type B F0 Index 1
Ticker	MQDC1LH0
Commodity	Lean Hogs
Trading Facility	CME
Static Contract Roll Schedule	GJJMMNQVVZZG+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lead type B F0 Index 1
Ticker	MQDC1LL0
Commodity	Lead
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Nickel type B F0 Index 1
Ticker	MQDC1LN0
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100

Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Copper type B F0 Index 1
Ticker	MQDC1LP0
Commodity	Copper
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Zinc type B F0 Index 1
Ticker	MQDC1LX0
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Natural Gas type B F0 Index 1
Ticker	MQDC1NG0
Commodity	Natural Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Gas Oil type B F0 Index 1
Ticker	MQDC1QS0
Commodity	Gas Oil
Trading Facility	ICE

Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Sugar type B F0 Index 1
Ticker	MQDC1SB0
Commodity	Sugar
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNVVVH+H+H+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybeans type B F0 Index 1
Ticker	MQDC1S0
Commodity	Soybeans
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNXXXXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Chicago) type B F0 Index 1
Ticker	MQDC1W0
Commodity	Wheat (Chicago)
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUUZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001



Index Calendar	NYMEX
----------------	-------

Index Name	Macquarie Single Commodity Congestion Beta Unleaded Gasoline (RBOB) type B F0 Index 1
Ticker	MQDC1RB0
Commodity	Unleaded Gasoline (RBOB)
Trading Facility	NYMEX
Static Contract Roll Schedule	GHJKMNQUVXZF+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	25 January 2006
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybean Oil type A F0 Index 1
Ticker	MQDD1BO0
Commodity	Soybean Oil
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNZZZF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Corn type A F0 Index 1
Ticker	MQDD1C0
Commodity	Corn
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUUZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta WTI Crude Oil type A F0 Index 1
Ticker	MQDD1CL0
Commodity	WTI Crude Oil
Trading Facility	NYMEX

Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Brent Crude Oil type A F0 Index 1
Ticker	MQDD1CO0
Commodity	Brent Crude Oil
Trading Facility	ICE
Static Contract Roll Schedule	HHKKNNUXXF+F+H+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Cotton type A F0 Index 1
Ticker	MQDD1CT0
Commodity	Cotton
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNZZZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta High Grade Copper type A F0 Index 1
Ticker	MQDD1HG0
Commodity	High Grade Copper
Trading Facility	COMEX
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001

Index Calendar	NYMEX
----------------	-------

Index Name	Macquarie Single Commodity Congestion Beta Heating Oil type A F0 Index 1
Ticker	MQDD1H00
Commodity	Heating Oil
Trading Facility	NYMEX
Static Contract Roll Schedule	HHKKNNUUXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Coffee type A F0 Index 1
Ticker	MQDD1KC0
Commodity	Coffee
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-4
Post-roll Start Date	10
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Kansas) type A F0 Index 1
Ticker	MQDD1KW0
Commodity	Wheat (Kansas)
Trading Facility	KCBOT
Static Contract Roll Schedule	HHKKNNUZZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	25 January 2002
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Aluminium type A F0 Index 1
Ticker	MQDD1LA0
Commodity	Aluminium
Trading Facility	LME
Static Contract Roll Schedule	HHKKNNUUXF+F+

Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Live Cattle type A F0 Index 1
Ticker	MQDD1LC0
Commodity	Live Cattle
Trading Facility	CME
Static Contract Roll Schedule	GJJMMQVVZZG+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Lean Hogs type A F0 Index 1
Ticker	MQDD1LH0
Commodity	Lean Hogs
Trading Facility	CME
Static Contract Roll Schedule	GJJMMNQVVZZG+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Nickel type A F0 Index 1
Ticker	MQDD1LN0
Commodity	Nickel
Trading Facility	LME
Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Zinc type A F0 Index 1
Ticker	MQDD1LX0
Commodity	Zinc
Trading Facility	LME
Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Natural Gas type A F0 Index 1
Ticker	MQDD1NG0
Commodity	Natural Gas
Trading Facility	NYMEX
Static Contract Roll Schedule	HHKKNNUXXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Sugar type A F0 Index 1
Ticker	MQDD1SB0
Commodity	Sugar
Trading Facility	NYBOT
Static Contract Roll Schedule	HHKKNNVVVH+H+H+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybeans type A F0 Index 1
Ticker	MQDD1S0
Commodity	Soybeans
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNXXXXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12

Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Soybean Meal type A F0 Index 1
Ticker	MQDD1SM0
Commodity	Soybean Meal
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNZZZF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Wheat (Chicago) type A F0 Index 1
Ticker	MQDD1W0
Commodity	Wheat (Chicago)
Trading Facility	CBOT
Static Contract Roll Schedule	HHKKNNUUZZH+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	21 December 2001
Index Calendar	NYMEX

Index Name	Macquarie Single Commodity Congestion Beta Unleaded Gasoline (RBOB) type A F0 Index 1
Ticker	MQDD1RB0
Commodity	Unleaded Gasoline (RBOB)
Trading Facility	NYMEX
Static Contract Roll Schedule	HHKKNNUUXF+F+
Pre-roll Start Date	-4
Post-roll Start Date	12
Pre-roll Length	3
Post-roll Length	2
Start Level	100
Start Date	25 January 2006
Index Calendar	NYMEX



## CONTACTS

---

For more information on the Macquarie Single Commodity Congestion Beta Indices please contact:

[Arun.Assumall@macquarie.com](mailto:Arun.Assumall@macquarie.com)

[Maia.mathieson@macquarie.com](mailto:Maia.mathieson@macquarie.com)