

Macquarie Risk Parity Index

**Index Manual
September 2014**

Notices and Disclaimers

Basis of Provision

This Index Manual sets out the rules for the Index and reflects the methodology for determining the composition and calculation of the Index (the “**Methodology**”). The Methodology and the Index derived from this Methodology are the exclusive property of Macquarie Bank Limited (the “**Index Sponsor**”). They have been provided to you solely for your internal use and you may not, without the prior written consent of the Index Sponsor, distribute, reproduce, in whole or in part, summarise, quote from or otherwise publicly refer to the contents of the Methodology or use it as the basis of any financial instrument.

Date of Index Manual and Changes to the Index

The Index Manual contains information as of the date appearing on its cover, and such information may change from time to time. No assurance can be given that the Methodology reflects information subsequent to the date appearing above. The Index Sponsor may, however, supplement, amend or withdraw the Methodology at any time if it determines that the Index is no longer calculable under the existing Methodology. The Index Sponsor may also determine that a change to the Methodology is required or desirable to address an error, ambiguity or omission. Such changes may include changes to eligibility requirements or construction as well as changes to the daily Index calculations. If a supplement or amendment is required, the Index Sponsor will publish any 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 the Index in any contract or financial instrument, you should include in such contract or financial instruments robust fall-back provisions to deal with cessation or material modification of the Index.

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 the Index. Any offering or potential transaction that may be related to this Index will be made separately and subject to distinct documentation and in such case the information contained herein may be superseded in its entirety by such documentation in final form.

The Index and any financial instruments based on this 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 Index

The hypothetical back-tested historical values of the Index are not indicative of future performance. The Index Sponsor makes no representation as to the accuracy of 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. For further information, see the section of this Index Manual entitled Note on Hypothetical Back-tested Historical Calculations.

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 and/or its affiliates. This document is intended to provide a summary of the index it purports to describe. The Index Sponsor expressly disclaims (to the fullest extent permitted by applicable law) all warranties (express, statutory or implied) regarding this document and the Methodology or this Index, including but not limited to all warranties of merchantability, fitness for a particular purpose of use 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 does not warrant or guarantee the accuracy or timeliness of calculations of the Index value and does not warrant or guarantee the availability of the Index value on any particular date or at any particular time. The Index Sponsor shall have no liability to any person for delays, omissions or interruptions in the delivery of this Index, including as a result of the failure of prices to be published in respect of a Contract or as a result of a Contract failing to trade for any reason. Although the Index Sponsor 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 as to the accuracy and completeness of information concerning this Index.

In particular, the Index Sponsor is 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 Sponsor as a result of such determination that an Market Disruption Event has occurred.

Notices

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

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 authorised and regulated by the Australian Prudential Regulation Authority. Authorised by the Prudential Regulation Authority and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. MBIL is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

Table of Contents

Contents

Notices and Disclaimers	2
Table of Contents	5
Introduction	6
About the Macquarie Risk Parity index	6
The Macquarie Risk Parity Index Supervisory Committee	6
The Index Sponsor	7
The Index Calculation Agent	7
Relationship of the Index Sponsor and the Index Calculation Agent	7
Calculating the Weights of the Macquarie Risk Parity Index	8
Introduction	8
Eligible Trading Facilities	9
Commodity Selection Process	10
Calculation of the Target Weights	12
Calculating the Level of the Macquarie Risk Parity Index	15
Roll Schedule	15
Holdings Calculation	16
Roll Weights Calculation	17
Daily Index Calculations	18
Market Disruption Events	19
Calculating the Macquarie Risk Parity Single Commodity Indices	20
Note on Hypothetical Back-tested Historical Calculations	21
Calculation of the Index Level	21
Other determinations relating to the Index	21
Definitions	22

Introduction

About the Macquarie Risk Parity index

The Macquarie Risk Parity Index (the *MQRP Index*), a part of the Macquarie Commodity Indices family, is designed as a commodity index benchmark for investment in the commodity markets. It is also designed as a tradable index that is readily accessible to market participants. In order to accomplish these objectives, the MQRP Index uses the risk parity principle of risk-based diversification to generate its Weights. A typical risk parity commodity portfolio spreads risk exposure evenly across commodities classes according to a particular definition of “risk”. The use of the risk parity methodology is meant to address the fact that an equal notional investment in two different assets can entail drastically different amounts of “risk”, as defined by the methodology. The MQRP Index aims to achieve a diversified exposure to commodities by maintaining an equal amount of “risk”, rather than an equal amount of notional, across the different commodities included in the index.

The MQRP Index is calculated and maintained by the Index Calculation Agent and supervised by the Index Sponsor and Supervisory Committee, as described below.

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

The Index sponsor will publish the Index Manual as well as any announcements regarding calculations relevant to the Index, such as new Target Weight calculations, in a timely manner on its website, <http://www.macquarie.com/commodityindexdocumentation>

The Macquarie Risk Parity Index Supervisory Committee

The Index Sponsor has established a Supervisory Committee to review and provide guidance on aspects related to the calculation of the Index.

Responsibility of Supervisory Committee

The Supervisory Committee considers the features of the Index and 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 including:

- Approval of the Index Methodology, including the eligible Trading Facilities;
- Approval of any changes to the Index Methodology or constituents of the Index, or termination of the Index;and
- Resolution of any issues which arise in relation to the Index.

Criteria of Supervisory Committee Membership

The Supervisory Committee is comprised of the following membership, each of whom will be an employee of Macquarie Bank Limited:

- A Senior Managing Director in the Metals & Agriculture Sales and Trading division of the Fixed Income, Currencies and Commodities 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 Supervisory Committee is required to be sufficiently knowledgeable about commodity futures contracts and the commodities markets in general, and act in good faith and in a commercially reasonable manner. The Index Sponsor will from time to time (and in any event within 30 days of any change in the membership of the Supervisory Committee) make available upon request the names of the individuals forming the Supervisory Committee.

Frequency

The Supervisory Committee met prior to the finalisation of the Index Methodology and will, in future, meet no less than annually and will also be available on an ad hoc basis for resolution of any issues which arise.

The Index Sponsor

Macquarie Bank Limited is the Index Sponsor. Notwithstanding anything to the contrary, the Index Sponsor will maintain all ownership rights, expressed or otherwise, with respect to the Index, including the ability to license, sell or transfer any or all of its ownership rights with respect to the Index, including but not limited to terminating and appointing any successor Index Calculation Agent. The Index Calculation Agent is appointed by the Index Sponsor to calculate and maintain the Index from and until such time that the Index Sponsor terminates its relationship with the current Index Calculation Agent and appoints a successor index calculation agent. Any such termination or appointment of a successor will be subject to the approval of the Supervisory Committee.

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 MQRP Index as of the date of this Manual. The methodology employed by the Index Calculation Agent in determining the composition and calculation of the MQRP index is set out in the calculations and procedures described in this Manual. The Index Sponsor may from time to time revise, amend and/or supplement this methodology, and if such rules are amended or supplemented, the Index Calculation Agent shall publish a new methodology no later than one calendar month prior to implementation of the amended or supplemented rules. If it is not reasonably practicable to publish a revised Manual one month prior to such changes, the revised Manual will be published as soon as reasonably practicable.

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 Supervisory 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.

Calculating the Weights of the Macquarie Risk Parity Index

Introduction

This section describes the calculation of the Weights of the Index. First, the principles which guide the Index construction are discussed, specifically risk parity, diversification and liquidity. Subsequently, the method by which commodities are selected for inclusion in the Index is presented: the facilities where the contracts available for inclusion in the Index are listed followed by a list of the criteria through which specific commodities are selected for inclusion in the Index. Finally, the actual calculation of the weights used in the daily calculation of the index is presented.

RISK PARITY FOR COMMODITIES

The Weights of the Macquarie Risk Parity Index are calculated using the principle of risk parity. The risk parity principle is an approach to commodity futures portfolio construction which allocates weight by risk. This approach differs from traditional commodity portfolios that allocate based on measures of “market cap” or “amounts outstanding” such as production value, volume, or open interest in commodity markets.

Risk parity commodity portfolios offer a benchmark for commodities as an asset class by relying on risk-based diversification for weighting exposure. By contrast, traditional commodity portfolios based on measures of amounts outstanding aim at weighting commodities according to their significance in the global economy or in financial markets. As a result, risk parity portfolios are likely to spread exposure more evenly across commodities relative to production-weighted indices.

DIVERSIFICATION

Traditionally, simple risk parity strategies aim for equal risk across investments. Therefore, a simple risk parity strategy would target an equal amount of risk in each commodity. However, the Macquarie Risk Parity Index incorporates correlations across different commodities in order to equalize risk contributions. In commodities, pairs such as crude oil and refined products, or soybeans and soybean meal, can be highly correlated with each other and their risk should be assessed jointly.

While risk parity is the governing principle behind the Macquarie Risk Parity Methodology, the weighting Methodology also aims to satisfy principles of diversification and liquidity. A disproportionate weighting of any particular commodity or sector negates the concept of a broad-based commodity index, overexposing investors to idiosyncratic shocks from one commodity market or sector. In order to satisfy the principle of diversification the Macquarie Risk Parity Weighting Methodology establishes that no commodity or group of highly correlated commodities can have more than 20% weight in the Index except for one, which can have up to 35% weight. Additionally, some commodities which exhibit particularly high correlation will be considered as a single commodity for the purposes of this criterion, as described on page 12.

LIQUIDITY

Another goal of the Macquarie Risk Parity Weighting Methodology is liquidity. For risk parity commodity portfolios to be a benchmark for commodities as an asset class, it needs to provide exposure to highly liquid markets, suitable for institutional investment. The explicit inclusion of liquidity as a constraint in the commodity Selection process helps to ensure that the MQRP Index can accommodate substantial investment flows and reduces transaction costs. In addition, liquidity allows for reliability of pricing and historical performance.

Eligible Trading Facilities

Subject to the approval of the Macquarie Risk Parity Index Supervisory Committee, the Index Sponsor will typically consider for inclusion in the Index commodity futures markets traded on futures exchanges or trading facilities that are subject to regulation covered by the U.S. Commodity Exchange Act, or other applicable statutes and related regulations, that govern trading on regulated U.S. futures exchanges, or similar statutes and regulations that govern trading on regulated U.K. futures exchanges. The list of Eligible Trading Facilities is subject to change from time to time and only with the approval of the Supervisory Committee. For the year of 2014 and all years prior to the launch of the index in 2014, the Eligible Exchanges are:

New York Mercantile Exchange

World Financial Center, One North End Avenue, New York, New York, 10282, United States of America

Tel: +1 (212) 229 2000

www.nymex.com

Chicago Mercantile Exchange (CME)

20 South Wacker Drive, Chicago, Illinois 60606, USA, Tel: +1 (312) 930 1000

www.cme.com

Chicago Board of Trade (CBOT)

141 West Jackson Boulevard, Chicago, Illinois 60604-2994, Tel: +1 (312) 435 3500

www.cbot.com

The Chicago Mercantile Exchange (CME), the Chicago Board of Trade (CBOT), and the New York Mercantile Exchange (NYMEX and COMEX Divisions) have merged to form a single entity, the CME Group (Main Switchboard: 866-716-7274, www.cmegroup.com)

London Metals Exchange (LME)

56 Leadenhall Street, London EC3A 2DX, Tel: +44 (0) 20 7264 5555

www.lme.com

ICE Futures Europe

5th Floor, Milton Gate, 60 Chiswell Street, London, UK EC1Y 4SA, Tel: +44 (0) 20 7065 7700

www.theice.com/homepage.ihtml

ICE Futures US

One North End Avenue, New York, NY, USA 10282-1101, Tel: +1 (212) 748 4000

www.theice.com/homepage.ihtml

Commodity Selection Process

Futures contracts need to satisfy certain requirements to be eligible for inclusion in the MQRP index. The Index Sponsor will determine the list of Eligible Contracts for a particular calendar year in a commercially sensible manner. The Eligible Contracts will be determined by the Index Sponsor as soon as reasonably practicable following the Observation Date in respect of each calendar year, and will take effect on the first Roll Period of the calendar year to which they correspond. The Eligible Contracts in respect of a calendar year will be determined using data as of the Observation Date corresponding to that year and will be published as soon as reasonably practicable following such Observation Date, typically in the following four to eight weeks.

The requirements for a futures contract to be an Eligible Contract are:

- It must trade in one of the eligible Trading Facilities;
- It must be denominated in U.S. Dollars;
- It must be based on a physical commodity (or the price of a physical commodity) and provide for cash settlement or physical delivery at a specified time, or during a specified period, in the future. Therefore, swap contracts, basis contracts, spread contracts. Emissions, and weather contracts are not Eligible Contracts;
- The contract must have a Total Trading Volume of at least 500,000 contracts for each annual period;
- It must not give substantially the same exposure as a contract with larger Total Trading Volume. Therefore, “mini” contracts as defined by the Trading Facility and contracts for the same commodity in different geographic locations will only be Eligible Contracts if their Total Trading Volume is the largest one.

However, the Index Sponsor may, in its discretion and subject to the approval of the Supervisory Committee, determine that a contract that does not satisfy one or more of the requirements set forth above will nevertheless be included in the MQRP index, if the inclusion of a contract is, in the judgment of the Supervisory Committee, necessary or appropriate for the maintenance of the integrity of the MQRP index and/or the realization of its objectives.

For the year of 2014, the Eligible Contracts are:

Commodity	Volume	Sector	Exchange
Brent Crude	12,868,317	Energy	ICE EU
Natural Gas	7,239,709	Energy	XNYM
Corn	5,403,544	Energy	ICE EU
Gasoil	5,321,600	Ag	XCBT
Aluminum	5,276,310	Non-precious	XLME
Gold	3,981,265	Precious	XNYM
Soybeans	3,886,712	Ag	XCBT
Copper	3,269,740	Non-precious	XLME
RBOB Gasoline	2,962,607	Energy	XNYM
Zinc	2,533,578	Non-precious	XLME
Sugar #11	2,345,524	Ag	IFUS

Soybean Oil	2,146,654	Ag	XCBT
Wheat	2,115,398	Ag	XCBT
Soybean Meal	1,581,739	Ag	XCBT
Silver	1,218,800	Precious	XNYM
Lead	1,137,356	Non-precious	XLME
Live Cattle	1,077,122	Ag	XCME
Nickel	1,050,594	Non-precious	XLME
Lean Hogs	935,115	Ag	XCME
Coffee	593,568	Ag	IFUS
Cocoa	544,903	Ag	IFUS
Cotton #2	530,282	Ag	IFUS

Note: The calculations to determine the set of Eligible Contracts were based on trading volume and prices from September 2012 to August 2013.

Calculation of the Target Weights

The Target Weights are the weights which are calculated annually, using data as of the Observation Date in respect of each calendar year, and which represent the application of the principles of the Macquarie Risk Parity Index as listed earlier in this section. The Target Weights will be calculated by the Index Sponsor as soon as reasonably practicable following the Observation Date in respect of each calendar year, and will take effect on the first Roll Period of the calendar year to which they correspond. The Index Sponsor will announce the new Target Weights on its website once they have been calculated, typically during the months of September or October of each year.

These Target Weights will be utilized in order to determine the holdings of the Index and subsequently the levels of the excess return and total return versions of the Index.

Group of highly correlated commodities

In order to satisfy the principle of diversification, the Macquarie Risk Parity Weighting Methodology establishes that no Commodity or Group of Highly Correlated Commodities can have more than 20% weight in the Index except for one which can have up to 35% weight. If two Commodities are highly correlated with each other, they will be considered jointly for the purpose of satisfying the 35%/20% upper bound on weights.

The Index Calculation Agent will determine the list of Groups of Highly Correlated Commodities for a particular calendar year. The returns of each Commodity are calculated based on the time series $\{P_{i,t}/P_{i,t-1} - 1\}$ for $t = R-252$ to R , where $P_{i,t}$ is the Index Level of the Single-Commodity Index corresponding to Commodity i on the Index Business Day t . Hence, two Commodities are considered not highly correlated if on a 252-day rolling time window over a 5-year period, the rolling correlation of returns is not above the 80% threshold more than 75% of the time.

In the event that the Index Calculation Agent determines that certain commodities that do not fulfil the above conditions nonetheless respond similarly to changes in market conditions, then it can declare those commodities to be part of the same Group of Highly Correlated Commodities. In that case, if other commodities were already in the same Group of Highly Correlated Commodities with either of the aforementioned commodities, then the commodity which is not part of that group will be added to that group. Any such declaration will need to be approved by the Supervisory Committee.

Once a Commodity has been added to a Group of Highly Correlated Commodities by the Index Calculation Agent, it will remain part of that group until such time as the Index Calculation Agent announces that it is no longer part of that group.

The Index Calculation Agent will announce the Groups of Highly Correlated Commodities at the same time as it announces the Target Weights of the index in respect of an upcoming year.

For the year of 2014 and all preceding years, the Groups of Highly Correlated Commodities are:

Oil Group: Brent Crude Oil, Gas Oil, RBOB Gasoline

Soybean Group: Soybeans, Soybean Meal

Calculating Risk

On an Observation Day, R , the Volatility $V_{i,R}$ corresponding to Commodity i is calculated according to the formula below:

$$V_{i,R} = \sqrt{252 \times \frac{\sum_{t=R-252}^R \left[\ln \left(\frac{P_{i,t}}{P_{i,t-1}} \right) - \left(\frac{\sum_{t=R-252}^R \ln \left(\frac{P_{i,t}}{P_{i,t-1}} \right)}{252} \right) \right]^2}{251}}$$

where the time series $\{P_{i,R-p} | p = 0, \dots, 253\}$ is the time series of the Index Level for the MQRP Single Commodity Index corresponding to commodity i over the last 253 Index Business Days leading up to the Observation Day R . These levels are calculated according to the section titled “Calculating the Macquarie Risk Parity Single Commodity Indices”.

Initial Weights and ranks

On each Observation Day, the Index Calculation Agent will determine the Initial Weight for each Commodity. This means that more volatile Commodities will receive a smaller weight than less volatile Commodities. These initial weights are then used by the Index Calculation Agent to determine the Target Weights of the index by applying certain upper limits to the weights so that no Commodity or Group of Highly Correlated Commodities will be above those limits.

On an Observation Day R , the Initial Weight for each Commodity i is calculated as follows:

$$IW_{i,R} = \frac{V_{i,R}^{-1}}{\sum_{k=1}^n (V_{k,R}^{-1})}$$

The set of volatilities $\{V_{1,R}, \dots, V_{n,R}\}$ is used to rank the commodities in inverse order. The commodity with the smallest value among $\{V_{1,R}, \dots, V_{n,R}\}$ will have rank equal to 1, the commodity with the second smallest value among $\{V_{1,R}, \dots, V_{n,R}\}$ will have rank equal to 2, and so forth. Given these ranks, we set the rank of every commodity in the same Group of Highly Correlated commodities equal to the highest (with 1 being higher than 2 etc.) rank of all commodities within that group and adjust ranks of other commodities so that ranks are sequential integers.

The set $\{K_{1,R}, \dots, K_{n,R}\}$ is the set of ranks is then defined as above with commodities within the same Group of Highly Correlated commodities having the same rank.

For example, if Brent Crude Oil, RBOB Gasoline and Gas Oil are part of the same Group of Highly Correlated Commodities and their respective ranks in respect of an Observation Day R are equal to 3, 7 and 11, then the rank of all three will be set equal to 3, with the ranks of other commodities ranked 8 or below adjusted appropriately. Therefore the commodity that was previously ranked 8 will be ranked 7; the commodity that was previously ranked 11 will be ranked 9 and so on.

Target Weights for the highest rank

The Target Weights for the commodity or commodities with the highest rank (i.e. rank 1) are set by following these steps:

1. We set the Target Weight of every commodity i in the set of the highest ranked commodities, $\{j | K_{j,R} = 1\}$, equals to $W_{i,R} = \min\left(\sum_{\{j | K_{j,R} = 1\}} IW_{j,R}, 35\%\right) \times \frac{IW_{i,R}}{\sum_{\{j | K_{j,R} = 1\}} IW_{j,R}}$, where the set $\{j | K_{j,R} = 1\}$ is the set of commodities j for which $K_{j,R} = 1$;
2. Once the Target Weights for these commodities have been established, we can calculate the Total Weight for commodities ranked 1 as $TW_{1,R} = \sum_{\{j | K_{j,R} = 1\}} W_{j,R}$;
3. We calculate the Remainder Weight in respect of rank 1 as $RW_{1,R} = \sum_{p \in NATW_1} IW_{p,R}$ where $NATW_1$ is the set of commodities for which Target Weights have not yet been defined after this first step;
4. We then recalculate the Initial Weight for all commodities for which Target Weights have not yet been defined according to the formula $IW_{i,R} = \left(1 - TW_{1,R}\right) \times \frac{IW_{i,R}}{RW_{1,R}}$

Target Weights for lower ranks

To set Target Weights for the remaining commodities, we follow a sequence of steps starting with the group of commodities with rank equal to 2, i.e., $k = 2$:

1. We calculate the Total Weight for commodities ranked k as $TW_{k,R} = \sum_{\{j | K_{j,R} = k\}} IW_{j,R}$

2. If $TW_{k,R} \leq 20\%$, the Target Weights for all remaining commodities with rank k are defined as the Initial Weights calculated in respect of the immediately preceding rank and we move to step 6;
3. If $TW_{k,R} > 20\%$, we set the Target Weights of every commodity i with rank equal to k , $\{j \mid K_{j,R} = k\}$, equal to
$$W_{i,R} = \min \left(\sum_{\{j \mid K_{j,R} = k\}} IW_{j,R}, 20\% \right) \times \frac{IW_{i,R}}{\sum_{\{j \mid K_{j,R} = k\}} IW_{j,R}};$$
4. We calculate the Remainder Weight in respect of rank k as $RW_{k,R} = \sum_{p \in NATW_k} IW_{p,R}$; where $NATW_k$ is the set of commodities for which Target Weights have not yet been defined after the Target Weights for commodities with rank up to and including k have been defined, and
5. Reset the Initial Weight for all other commodities for which Target Weights have not yet been defined as
$$IW_{i,R} = \left(1 - \sum_{\{j \mid K_{j,R} \leq k\}} W_{j,R} \right) \times \frac{IW_{i,R}}{RW_{k,R}};$$
6. Move on to the next set of commodities with lower rank by repeating steps 1 to 5 for $k = k + 1$.

Calculating the Level of the Macquarie Risk Parity Index

On each Index Business Day, the Index Calculation Agent will determine the levels of the Excess Return and Total Return versions of the Macquarie Risk Parity Index according to this section. This requires calculating the Holdings in respect of each Commodity included in the Index, the Roll Weights in respect of each Contract Rolling Out and each Contract Rolling In, which are determined in respect of each Commodity according to the Roll Schedule section below, the Settlement Prices in respect of each Contract included in the Index and, for the Total Return version, the Treasury Bill Rate of the most recent US Treasury Bill Auction prior to that Index Business Day. These numbers are determined according to their respective sub-sections below.

Roll Schedule

Commodity indices are designed to give investors exposure to commodity prices. For that reason, many commodity benchmarks keep futures exposure as close to spot prices as possible by rolling commodity futures as close to maturity as possible. The principle behind this idea is that futures with short maturity are more representative of spot wholesale commodity prices. In contrast, MQRP index is a benchmark for commodities as an asset class and its roll schedule is designed to make the MQRP index efficient as an investment benchmark. To achieve that, the MQRP index follows a basic principle based on the economics of commodity storage.

In a normal market environment, the cost of storage of a commodity should be embedded in the forward curve, limited by arbitrage between the physical spot market and the forward/futures market through cash-and-carry trades. This physical arbitrage relationship does not always hold and is likely to be stronger for the markets in which storage economics plays an important role in the price discovery process.

However, even for the same commodity, the cost of storage embedded in the forward curve is not always the same across maturities. The economics of commodity storage suggests that “forward” cost of storage should typically be lower than “spot” cost of storage, and the cost of storage embedded in the forward curve should decrease as the contract maturity increases. It follows from that principle that contracts with longer maturities should mitigate the negative impact of the “implied cost of carry” in the returns of commodity futures and have higher risk-adjusted returns than contracts with shorter maturity.

Naturally, there is a trade-off between higher risk-adjusted returns on contracts with longer maturity and liquidity. The MQRP Index roll schedule balances the principles of economics of commodity storage with liquidity to achieve a similar degree of exposure to commodity prices, similar trading costs, but higher risk-adjusted returns than traditional commodity index benchmarks.

Roll period and contract schedule table

The Roll Start Date is the first (1st) Index Business Day of the month and the Roll Length is five (5) Index business days. The Static Contract Schedule Table is given below:

i	Commodity	Underlying contract for each month (Contract rolling out during the month)											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Brent Crude	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+	Z+
2	Natural Gas	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+

3	Gasoil	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
4	Corn	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
5	Aluminum	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
6	Gold	G	J	J	M	M	Q	Q	Z	Z	Z	Z	Z	G+	
7	Soybeans	N	N	N	N	N	N	N+	N+	N+	N+	N+	N+	N+	N+
8	Copper	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
9	RBOB Gasoline	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
10	Zinc	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
11	Sugar #11	H	H	H+	H+	H+	H+	H+	H+	H+	H+	H+	H+	H+	H+
12	Soybean Oil	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
13	Wheat	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
14	Soybean Meal	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
15	Silver	H	H	K	K	N	N	U	U	Z	Z	Z	Z	H+	
16	Lead	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
17	Live Cattle	Q	V	V	Z	Z	G+	G+	J+	J+	M+	M+	M+	Q+	
18	Nickel	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
19	Lean Hogs	Q	V	V	Z	Z	G+	G+	J+	J+	M+	M+	M+	N+	
20	Coffee	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+
21	Cocoa	U	U	Z	Z	Z	H+	H+	H+	K+	K+	N+	N+	N+	N+
22	Cotton #2	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+	Z+

* The letters, F, G, H, J, K, M, N, Q, U, V, X, and Z stand for the months of Jan, Feb, ..., Dec respectively with the sign “+” signalling the contract on the following year.

Holdings Calculation

On any Index Business Day, t , each Commodity i has a Holding, $H_{i,t}$ associated with it. As outlined in the next section, the Holdings, $\{H_{1,t} \dots, H_{n,t}\}$, of the n Commodities are used as inputs on the daily calculation of the Index. In this section, we outline the Holdings, $\{H_{1,t} \dots, H_{n,t}\}$, calculations on any Index Business Day, t , starting with the calculation of the Target Holdings on the Holdings Calculation Date, R , immediately preceding the Index Business Day t .

Target Holdings calculation on a Holdings Calculation Date

The calculation of the Target Holdings on a Holdings Calculation Date R requires as input the set of Target Weights obtained on the Observation Date immediately preceding the Holdings Calculation Date, R . The set of Settlement Prices of the Contract Rolling Out on the same date is another input to the calculation of the Holdings.

On any Holding Calculations Date, R , let the Target Weight of each Commodity i be denoted by $W_{i,R}$ so that $\{W_{1,R}, \dots, W_{n,R}\}$ are equal to the Target Weights of the n Commodities in the Index as generated according to the Calculation of Target Weights section above, in respect of the Observation Date immediately preceding the Holding Calculations Date, R . Analogously, let $\{CRO_{1,R-1}, \dots, CRO_{n,R-1}\}$ be the set of Settlement Prices of the Contract Rolling Out on the Index Business Day immediately preceding the Holding Calculations Date, R . The index Target Holdings, $\{TH_{1,R}, \dots, TH_{n,R}\}$, for each of the n Commodities in the Index are calculated (rounded to eight decimal points) according to the formula below:

$$TH_{i,R} = \left(\sum_{j=1}^n H_{j,R-1} \times CRO_{j,R-1} \right) \times \frac{W_{i,R}}{CRO_{i,R-1}} \text{ for every Commodity } i = 1, \dots, n$$

where $\{H_{1,R-1}, \dots, H_{n,R-1}\}$ is the set of Holdings prevalent on the Index Business Day immediately preceding Holding Calculations Date, R .

On the first Holding Calculations Date, R , set of Target Holdings is calculated (rounded to eight decimal points) according to the formula below:

$$TH_{i,R} = I_0 \times \frac{W_{i,R}}{CRO_{i,R-1}} \text{ for every Commodity } i = 1, \dots, n$$

where I_0 is the Initial Index Level.

Daily Holdings calculation

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

- (i) If t is the Index Business Day immediately following the last Index Business Day of the Roll Period (including the potential extension imposed by Market Disruption Events as outlined in Section 4), the Holdings $\{H_{1,t}, \dots, H_{n,t}\}$ are set equal to the Target Holdings $\{TH_{1,R}, \dots, TH_{n,R}\}$ calculated on the Holdings Calculation Date, R , immediately preceding the Index Business Day t .
- (ii) On any other Index Business Day, t , the Holding of each Commodity i on that day, $H_{i,t}$ is set to be equal to the Holding of that particular Commodity on the previous Index Business Day, $H_{i,t-1}$.

Roll Weights Calculation

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

- (i) The Roll Weight of Commodity i on Index Business Day t , $RW_{i,t}$ is equal to one (1) if the Index Business Day, t , precedes the Roll Period for the calendar month to which the Index Business Day t belongs.
- (ii) The Roll Weight of Commodity i on Index Business Day t , $RW_{i,t}$, will decrease by the amount defined by the Roll Fraction on each day of the Roll Period. That is, $RW_{i,t} = RW_{i,t-1} - \text{Roll Fraction}$ for each Index Business Day t belonging to the Roll Period until $RW_{i,t}$ is equal to zero at the end of the Roll Period.

- (iii) The Roll Weight of Commodity i on Index Business Day t , $RW_{i,t}$, is set equal to zero (0) for all Index Business Days succeeding the Roll Period in the calendar month to which the Index Business Day t belongs.
- (iv) If a Market Disruption Event occurs, then each Contract will have its roll postponed as described in Section 4.

Daily Index Calculations

On an Index Business Day, t , the Excess Return Index level, I_t , is calculated (rounded to the eight decimal points) based on the value of the Excess Return Index in the preceding Index Business Day, I_{t-1} , and the **Index Daily Return**, IDR_t , according to the formula:

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

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

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

where:

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

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

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

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

The Index Start Date as well as the Initial Index Level of the Excess Return version of the MQRP Index, which is the level of the Excess Return version of the MQRP Index on the Index Start Date, are specified in the definitions Section above.

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

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

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

where

$TBAR_{t-1}$ is the Treasury Bill Rate of the most recent weekly US Treasury Bill auction prior to the Index Business Day t , and

$days$ is the number of calendar days between the Index Business Day t and the previous Index Business Days $t-1$.

The Index Start Date as well as the Initial Index Level of the Total Return version of the MQRP Index, which is the level of the Total Return version of the MQRP Index on the Index Start Date, are specified in the definitions section above.

Market Disruption Events

Market Disruption Events are situations in which the normal course of trading is disrupted. In situations where these disruptions are unresolved or

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

- (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 Sponsor determines that the event materially interferes with the ability of any market participants to hedge the Index.

Roll Weight calculation under Market Disruption Events

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

- (i) For each Commodity i not affected by the Market Disruption Event, the Roll Weight, $RW_{i,t}$ is defined normally as in Section 2.
- (ii) For each Commodity i affected by the Market Disruption Event, the Roll Weight, $RW_{i,t}$, will be set equal its previous value, i.e., $RW_{i,t} = RW_{i,t-1}$.
- (iii) The postponed portion of the roll in (ii) above will roll on the first Index Business Day not affected by Market Disrupted Events.

In the event that the Roll Period ends without the Roll Weight being full 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 Sponsor retains the discretion to delay the rolling of the affected Contract and/or determine the relevant Settlement Price in order to effect that portion of the roll. It is anticipated, however, that the Index Sponsor will only exercise this discretion under extraordinary circumstances.

Calculating the Macquarie Risk Parity Single Commodity Indices

Calculating the MQRP Single Commodity Indices

In order to determine the weights for the Macquarie Risk Parity Index, the MQRP Single Commodity Indices need to be calculated for the purposes of the Calculating Risk section.

For each commodity, the corresponding MQRP Single Commodity Index will be calculated according to the Daily Index Calculation Methodology section, but assuming that the Target Weights for that commodity are always equal to 100% and the Target Weights for all other commodities are always equal to 0%.

Note on Hypothetical Back-tested Historical Calculations

Hypothetical back-tested levels of the Macquarie Risk Parity Index have been calculated using certain assumptions listed below and should not be taken as an indication of future results or performance. The back-tested levels of the Macquarie Risk Parity Index are determined in substantially the same way as future levels of the MQRP Index will be determined. However, certain information relating to determinations in respect of the Index or the calculation of the Index Level may have been unavailable to the Index Calculation Agent in the past. Below is a list of modifications to the methodology made by the Index Calculation Agent:

Calculation of the Index Level

- Prior to April 2006, the New York Unleaded Gasoline contract was used instead of the RBOB Gasoline contract for all index calculations
- Prior to 2007, the roll schedule of RBOB gasoline was as follows:

RBOB Gasoline	Z	Z	Z	Z	Z	Z	Z	Z	Z	V+	V+	Z+
---------------	---	---	---	---	---	---	---	---	---	----	----	----

Other determinations relating to the Index

- In determining the Eligible Exchanges for all years up to the launch of the Index, the Index Calculation Agent used data from September 2007 to August 2013
- In determining the Highly Correlated Commodities groups, the Index Calculation Agent used data from September 2007 to August 2013
- In determining which commodities to include in the index for all years up to the launch of the Index, the Index Calculation Agent used data from September 2007 to August 2013

Definitions

Commodity is each of the commodity futures markets specified in the Commodity Selection Process. The total number of Commodities included in the Index is denoted by n .

Commodity Selection Process is the process by which the Index Calculation Agent determines which Commodities will be included in the MQRP Index, as defined in the Commodity Selection Process section at page 10.

Contract is a futures contract traded on an eligible Trading Facility which has a commodity as its underlying.

The **Contract Rolling Out** of a Commodity on an Index Business Day is the Contract specified in the Static Contract Schedule Table specified in the relevant section below for the calendar month to which that particular Index Business Day belongs.

The **Contract Rolling In** of a Commodity on an Index Business Day is the contract specified in the Static Contract Schedule Table for the calendar month immediately following — with January following December — the calendar month to which that particular Index Business Day belongs.

Eligible Contract is a contract that is determined according to the Commodity Selection Process section.

Groups of Highly Correlated Commodities means groups of commodities that, due to their high correlation, are treated as being the same commodity for the purpose of certain determinations with regards to the Index, as described on page 12.

Holdings are numbers that are determined by the Index Calculation Agent and used in the daily calculation of the Index, as described in the Holdings Calculation section on page 16.

Holdings Calculation Date is the first Index Business Day of each calendar month.

Index Business Day means each day on which the level of the Index is scheduled to be published.

Initial Index Level means, in respect of each of the Total Return Index and Excess Return Index, the level of that index on the Index Start Date.

Index Start Date means *[define for both excess and total return]*.

Observation Date in respect of a calendar year is the final Index Business Day of August of the preceding calendar year.

Roll Start Date is the Index Business Day on which the index exposure periodically starts to move from the Contract Rolling Out into the Contract Rolling In for each Commodity. The Roll Start Date is specified in the Roll Schedule section on page 15.

Roll Length 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 Roll Schedule section on page 15.

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

Roll Fraction 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. The Roll Weights Calculation is set out on page 17.

Settlement Prices on 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.

Static Contract Schedule Table is the table denoting the futures that will be rolling into and out of the Index on a monthly basis for each Commodity. The table is shown in the Roll Schedule section on page 15.

Supervisory Committee means the supervisory committee of the Index as defined on page 6.

Trading Facility is an exchange, board of trade, facility or platform specified by the Index Sponsor according to the Eligible Trading Facilities section on page 9.

Target Holdings are a set of multipliers used for the daily calculations of the Index and are derived from the Weights. The Target Holdings calculations are set out on page 16.

Target Weights are the weights calculated according to the Target Weights Calculation section on page 12.

Treasury Bill Rate is the 91-day discount rate for U.S. Treasury Bills, as reported by the U.S. Department of the Treasury's Treasury Direct service (<http://www.treasurydirect.gov/RI/OFBills>).

Total Trading Volume of an Eligible Contract in respect of an Observation Date is the sum of the monthly average of daily volumes across all maturities for the months of September of the preceding year through August of the same year as published by the Futures Industry Association.

Total Market Size of an Eligible Contract in respect of an Observation Date is the Total Trading Volume multiplied by the average Settlement Price for the months of September of the preceding year to August of the year of the Eligible Contract with shortest maturity with the same underlying.

The MQRP Single-Commodity Indices are commodity indices tracking each of the Commodities in the Static Contract Schedule Table and determined by the Index Calculation Agent in accordance with the methodology specified in the Calculating the MQRP Single Commodity Indices section on page 20. The MQRP Single-Commodity Indices are used by the Index Calculation Agent to determine which Commodities would fall in Groups of Highly Correlated Commodities as described on page 12

Weights are the weights periodically established by the Macquarie Risk-Parity Weighting Methodology specified in the Calculation of the Target Weights section on page 12.