Macquarie Curve Carry Rotator 3% VT Index

Index Manual
June 2018

NOTES AND DISCLAIMERS

BASIS OF PROVISION

This Index Manual sets out the rules for the Macquarie Curve Carry Rotator 3% VT Index (the *Index*) and reflects the methodology for determining the composition and calculation of the Index (the Methodology section).

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

This Index Manual is the exclusive property of Macquarie Bank Limited (the *Index Sponsor*). It has 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 Index Manual or use it as the basis of any financial instrument.

DATE OF INDEX MANUAL AND CHANGES TO THE INDICES

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

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

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

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.

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

HISTORICAL VALUES OF THE INDEX

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

The Index Sponsor makes no representation as to the accuracy or appropriateness of, and shall have no liability to you or any other entity for any loss or damage, direct or indirect, arising from the use of the historical values.

DISCLAIMER OF LIABILITY

The Methodology is published for information purposes only and does not create any legally binding obligation on the part of the Index Sponsor, Index Calculation Agent and/or their affiliates. This document is intended to provide a summary of the index it purports to describe. The Index Sponsor expressly disclaims (to the fullest extent permitted by applicable law) all warranties (express, statutory or implied) regarding this document and the Methodology or the Index, including but not limited to, all warranties of merchantability, fitness for a particular purpose (including investment by regulated funds) and all warranties arising from course of performance, course of dealing or usage of trade and their equivalents under applicable laws of any jurisdiction. In particular, the Index Sponsor and Index Calculation Agent do not warrant or guarantee the accuracy or timeliness of calculations of the Index value and do not warrant or guarantee the availability of 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 the Index, including as a result of the failure of prices to be published in respect of an Underlying Contract or as a result of a Contract failing to trade for any reason. Although the Index Calculation Agent will obtain information concerning Underlying Contracts from publicly available sources it believes reliable, it will not independently verify this information. Accordingly, no representation, warranty or undertaking (express or implied) is made by the Index Sponsor or Index Calculation Agent as to the accuracy and completeness of information concerning 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 Index is based on Underlying Contracts, as described in the Methodology. The Index Sponsor and/or its affiliates actively trade Underlying Contracts and options on Underlying Contracts. The Index Sponsor and/or its affiliates also actively enter into or trade and market securities, swaps, options, derivatives, and related instruments which are linked to the performance of these Underlying Contracts or are linked to the performance of an 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 an Index for publication or for use by unaffiliated third parties. These activities could present conflicts of interest and could affect the value of the Index. The Index Sponsor trades or may trade as principal in instruments (or related derivatives) linked to 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.

CONTENTS

INTRODUCTION

The Macquarie Curve Carry Rotator 3% VT Index (hereinafter, the *Index*), is designed as a rules based index for tracking the performance of certain commodity short spread strategies, while targeting a certain level of volatility.

The Index obtains its exposure to the strategies via the Macquarie Curve Carry Rotator Index (the sole *Underlying Component* of the Index). The Index does not, however, simply track, on a one-for-one basis, the performance of this Underlying Component. The Index dynamically adjusts its exposure to the Underlying Component in order to target 3% volatility. To target 3% volatility, on each Index Business Day, the Index assesses its recent historic realized volatility over a long term (3 months) and a short term (1 month) window. If that historic realized volatility diverges more than 1% from the targeted 3% volatility, the Index will scale its exposure to the Underlying Component up or down in an effort to target a future realized volatility of 3%.

The Index is published daily in an Excess Return and an Excess Return Net of Fees format. The Excess Return Net of Fees Index Level has an embedded fee which represents a conservative estimate of what a broker-dealer would charge for the replication of the Index.

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 STRATEGIES

The Underlying Component is a risk weighted basket of three "commodity carry" strategies and a "commodity congestion" strategy.

Commodity carry strategies aim to take advantage of storage-related risk premium, the existence of which can be explained by the fact that short-term storage is typically more expensive than long-term storage. The premium can be captured by taking long exposure to long-dated (deferred) commodity futures contracts and simultaneous short exposure to short-dated (front month) commodity futures contracts (a "Spread"). If the shape of the futures curve remains unchanged, the strategy aims to generate a positive return through the difference in roll yields between the contracts on which long and short exposures are taken.

The principle behind commodity congestion strategies is to take advantage of the price pressure that results from the roll of the most commonly traded commodity indices and extract a risk premium related to the provision of liquidity during this period.

The Underlying Component assigns a weight to each of the four strategies, and rebalances these weights on a monthly basis thereafter, by reference to the historic realized volatility of each strategy. The calculation and methodology of the Underlying Component index is available on request or at http://www.macquarie.com/commodityindexdocumentation.

The Underlying Component is itself comprised of four component indices (each designed to track a commodity carry strategy or commodity congestion strategy):

1. Macquarie Minimum Drawdown Carry Alpha Index;
2. Macquarie Dynamic Carry Index;
3. Macquarie F6 vs F0 Curve Carry ex Brent & PM Index;
4. Macquarie Congestion Rotator Index.

The calculation and methodology of each of these indices is available on request or at http://www.macquarie.com/commodityindexdocumentation.

To gain a complete understanding of the Index, the index manual of the Underlying Index and the index manual of each index that constitutes the Underlying Component must be read together with this Index Manual.

```
                ┌─────────────────────────────────────────────┐
                │   Macquarie Curve Carry Rotator 3% VT Index   │
                └─────────────────────────────────────────────┘
                                      ▲
                                      │
                ┌─────────────────────────────────────────────┐
                │      Macquarie Curve Carry Rotator Index      │
                └─────────────────────────────────────────────┘
                   ▲           ▲            ▲            ▲
                   │           │            │            │
         ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
         │Macquarie │  │Macquarie │  │Macquarie │  │Macquarie │
         │ Minimum  │  │ Dynamic  │  │F6 vs F0  │  │Congestion│
         │ Drawdown │  │  Carry   │  │Curve     │  │ Rotator  │
         │  Carry   │  │  Index   │  │Carry ex  │  │  Index   │
         │Alpha     │  │          │  │Brent & PM│  │          │
         │ Index    │  │          │  │ Index    │  │          │
         └──────────┘  └──────────┘  └──────────┘  └──────────┘
```
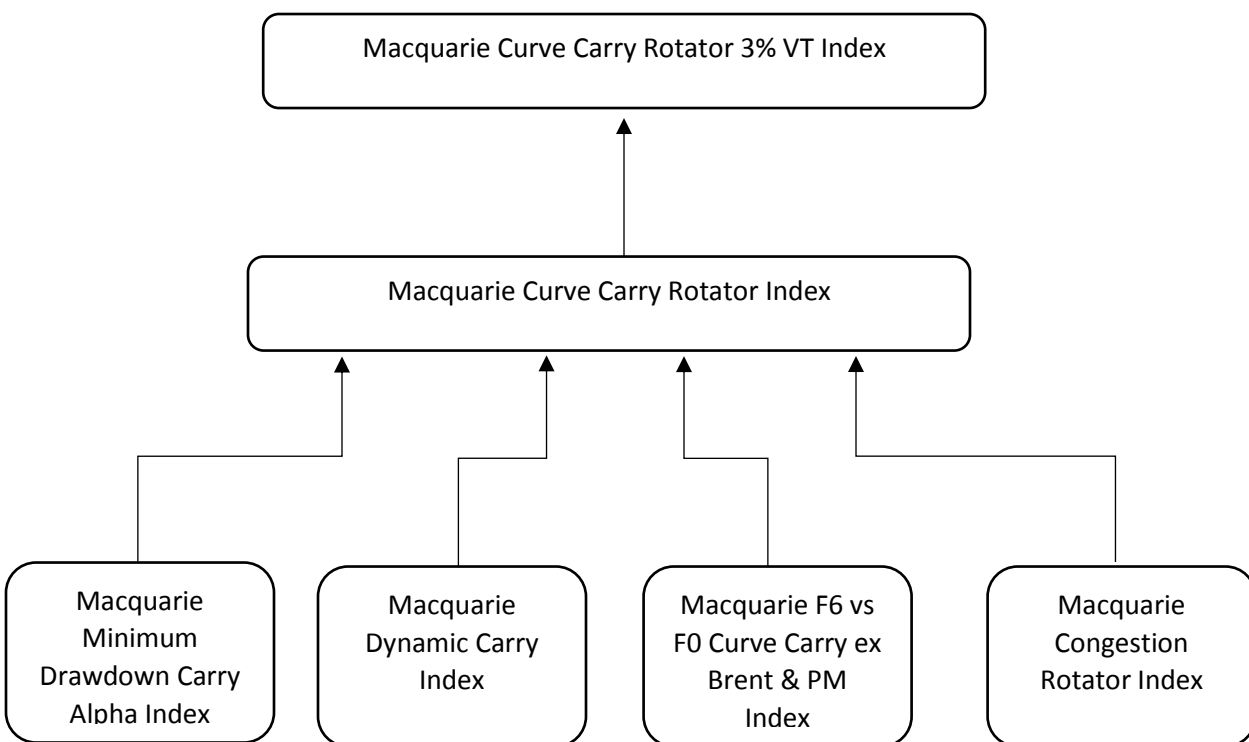
GENERAL NOTES ON THE INDEX AND THE METHODOLOGY

The Index is designed to be replicable and readily accessible to market participants and is calculated daily in an Excess Return format. To facilitate an understanding of the calculations, this Index Manual contains various worked examples which demonstrate the types of calculations needed to calculate the level of the Index on a particular date. The Index is calculated and maintained by the Index Calculation Agent and supervised by the Index Sponsor and Oversight Committee, as described below. Once the Index has been created, the Components and formula for calculating Weights will not be amended going forward. All determinations with regard to the Index are made following the rules set out in this document, without discretion by the Index Sponsor or Index Calculation Agent, save as such discretion as is called for in the rules. The Index is not based upon submissions provided by third parties (or an affiliate of the Index Sponsor or Index Calculation Agent) or expert judgment. The Index is based upon actual transaction data sourced from regulated markets and exchanges.

INDEX GOVERNANCE

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

- A Managing Director in the Commodity Markets & Financing division of the Commodities and Global Markets group;
- A Director from the Legal and Governance group;
- A representative from the Calculation Agent;
- A representative from the Risk division of the Risk Management Group;
- A representative from the Business Operational Risk Management department within the Central division of the Commodities and Global Markets group; and
- A representative from the Compliance division of the Risk Management Group.

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

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

The Oversight Committee has considered the features of the Index, the intended, expected or known usage of the Index and the materiality of existing or potential conflicts of interest and, taking these into account, has approved the Methodology and this Index Manual. The Oversight Committee is also charged with overseeing the daily management and operations of the Index. It will be available on an ad hoc basis for the approval of any changes to the Methodology or Components of the Index, any contemplated cancellation of the Index (or Components) and the resolution of any issues which arise in relation to the Index or Components of 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 the Index from and until such time that the Index Sponsor terminates its relationship with the current Index Calculation Agent and appoints a successor index calculation agent. Any such termination or appointment of a successor will be subject to the approval of the Oversight Committee.

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

Annual Fee, is **0.9%**

Components, the only Component is the Underlying Component

Component Level, in respect of an Index Business Day, is the closing level of each Component as determined by the Index Calculation Agent. If the Index Business Day is not a day on which the Component is scheduled to be published, the Component Level for that day will be the most recent available Component Level on the most recent publication day.

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

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

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

Holding, in respect of a Component and an Index Business Day, is a number which is determined by the Index Calculation Agent as described in Section 2 (*Holdings Calculation*) of the Index Calculation section below. The Holding in respect of a Component is determined in order to calculate the daily Index Level and represents the proportionate effect on the Index Level of a change in the relevant Component level.

Holdings Calculation Date, is a date on which the Target Holdings are periodically calculated in order to rebalance the Holding of the Component back to the specified Weight. Each Index Business Day is a Holdings Calculation Date.

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

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

Initial Index Level, is 100.

Index Level, is the level of the Index that is calculated according to the relevant section of this Methodology.

Index Rebalance Days, is the set of Holdings Calculation Dates.

Index Start Date, is 10/4/2006.

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

Index Ticker is, in relation to the Excess Return Index – **MQCP731E** Index (Bloomberg), and in relation to the Excess Return Net of Fees Index – **MQCP732E** Index (Bloomberg).

Long Term Volatility Lookback, is the number of days used in the calculation of the long term realized volatility used to calculate the Weights, as described in Section 4, and is equal to **63**.

Maximum Leverage, is the maximum Weight value (regardless of the level of realized volatility) and is equal to **250%**.

Minimum Leverage, is the minimum Weight value (regardless of the level of realized volatility) and is equal to **0%**.

Short Term Volatility Lookback, is the number of days used in the calculation of the short term realized volatility used to calculate the Weights, as described in Section 4, and is equal to **21**.

Target Holdings, are a set of multipliers, derived from the Weights, which are utilized to rebalance the Components of the Index on each Holdings Calculation Date. Calculation of Target Holdings is described in Section 1 (*Holdings Calculation*) of the Index Calculation section below.

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

Underlying Component, is the Macquarie Curve Carry Rotator Index (MQCP730E). The calculation and methodology for the Underlying Component is available on request or at http://www.macquarie.com/commodityindexdocumentation. For ease of reference, only ticker references have been included.

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

Volatility Distance Trigger, is the volatility deviation trigger used in the calculation of the Weight, as described in the Weight Calculation section, and is equal to **1%**.

Volatility Target, is the volatility target used in the calculation of the Weight, as described in the Weight Calculation section, and is equal to **3%**.

Weights, are the weights periodically established by the Weighting Methodology for each Component.

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

INDEX CALCULATION

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

- **Section 1** describes the calculation of Holdings, which are intermediate calculations that enable the Index Calculation Agent to reflect the changes stemming from the Index rebalance in the returns of the Index;
- **Section 2** describes the day-to-day calculation of the Index Level;
- **Section 3** describes Market Disruption Events and the additional calculations that the Index Calculation Agent will perform to determine the Index Level during and following any market disruptions.
- **Section 4** describes the Weighting Methodology;

SECTION 1: HOLDINGS CALCULATION

On any Index Business Day, *t*, each Component *i* has a Holding, $H_{i,t}$, associated with it. This Holding represents the proportion in which the Index Level will change when the level of that Component changes. In this section, the Holdings, $\{H_{1,t}, \dots, H_{n,t}\}$, calculations on any Index Business Day, *t* is outlined.

On each Index Rebalance Day, the Holding of each Component i, is rebalanced in accordance with the Target Holdings and the Weighting Methodology.

TARGET HOLDINGS CALCULATION ON A HOLDINGS CALCULATION DATE

The calculation of the Target Holdings on a Holdings Calculation Date, *R*, requires as input the set of Weights in respect of that Holdings Calculation Date R and the Component Levels of the Components on the Index Business Day immediately preceding Holdings Calculations Date, *R*.

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

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

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

For example if, on the Index Business Day preceding a Holdings Calculation Date, R, the Index level is 100, the Component Level is 80 and the Weight of that Component is 40%, then the Target Holding of that Component in respect of that Holdings Calculation Date will be equal to 100*(0.4)/80 = 0.5

DAILY HOLDINGS CALCULATION

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

(i) *If t is the Index Business Day immediately following the Holdings Calculation Date R,* the Holdings $\{H_{1,t}, ..., H_{n,t}\}$ for each of the n Components in the Index re set equal to the Target Holdings $\{TH_{1,R}, ..., TH_{n,R}\}$ calculated on that Holdings Calculations Date.

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

SECTION 2: DAILY INDEX CALCULATION

The Index represents the performance of a synthetic, unfunded exposure to the Underlying Contracts in an Index, that is, the Index tracks what an investor would receive if it purchased or sold the futures contracts ultimately underlying the Index without taking into consideration the cost of investment capital.

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

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

where:

I_t is the Index Level on the close of day t;
$H_{i,t}$ is the Holding of Component i on the Index Business Day t;
$C_{i,t}$ is the level of Component i on the Index Business Day t;
t-1   is the Index Business Day immediately preceding Index Business Day t

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

For example, if the Index were comprised of two components (for simplicity) which had the following Component levels:

	Component 1	Component 2
Index Business Day t-1	32.48	31.21
Index Business Day t	32.83	31.49

and the following Holdings:

	Holding
Component 1	1.72
Component 2	1.48

then if the Index Level on Index Business Day t-1 was equal to 102.0564, the Index Level on Index Business Day t will be equal to:

$$I_t = 102.0564 + 1.72 \times (32.83 - 32.48) + 1.48 \times (31.49 - 31.21) = 103.0728$$

The Index Level on Business Day t would be 103.0728.

The Excess Return Net of Fees Index

On each Index Business Day, *t*, the Excess Return Net of Fees Index Level, *FI$_t$*, is calculated (rounded to eight decimal points) based on the value of the Excess Return Net of Fees Index on the preceding Index Business Day, *FI$_{t-1}$*, the Index Daily Return, *IDR$_t$*, and the Daily Fee (rounded to eight decimal points), *DF$_t$*, according to the formula:

$$FI_t = FI_{t-1} \times (1 + IDR_t) - DF_t$$

$$DF_t = FI_{t-1} \times \frac{AnnualFee \times \Delta_{day}}{365}$$

where

Δ_{day} is the number of calendar days between the Index Business Day *t* and the previous Index Business Day *t-1*; and

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

$AnnualFee$ is the Annual Fee as specified in the Definitions section.

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

SECTION 3: MARKET DISRUPTION EVENTS

The Index is comprised of a number of Components which are comprised of one or more futures contracts (each an Underlying Contract). On any given Index Business Day, disruptions can occur that prevent these Underlying Contracts from being traded. When this happens, it is necessary for the calculations of Index to be adjusted so that the Index 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 are attainable in the market at the times they need to be traded in order to replicate the performance of the Index.

With respect to the calculation of the Index on an Index Business Day, a **Market Disruption Event** means the occurrence, in respect of one or more Underlying Contracts, of one or more of the following events as determined by the Index Calculation Agent:

(i)   a failure by the relevant Trading Facility to report or announce a Settlement Price for an Underlying Contract;

(ii)   all trading in an Underlying Contract is suspended and does not recommence at least ten minutes prior to the actual closing time of the regular trading session;

(iii)   the Settlement Price published by the relevant Trading Facility for one (or more) Underlying Contracts is a "limit price", which typically means that the Trading Facility published settlement price for such Underlying Contract for a trading day has increased or decreased from the previous trading day's settlement price by the maximum amount permitted under applicable rules of the Trading Facility;

(iv)   the index sponsor of a Component fails to publish a Component Level;

(v)   any other event, if the Index Calculation Agent reasonably determines that the event materially interferes with the ability of the market participants to hedge the Index; and

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

INDEX CALCULATION UNDER MARKET DISRUPTION EVENTS

When a Market Disruption Event occurs or is continuing on an Index Business Day, the Index Calculation Agent will determine the basket of Underlying Contracts that is equivalent to the basket of Components that the Index represents on that Index Business Day. Once this equivalent basket is determined, the Index Calculation Agent will make such adjustments as are necessary, as further described below.

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

(i)   As long as a Market Disruption Event that occurred on the Disrupted Index Rebalance Day R is continuing, on each subsequent disrupted Index Business Day t, the Excess Return Index Level will be calculated according to the following formula :

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

Where

$H'_{j,t}$	is the Equivalent Holding for Underlying Contract j on Index Business Day t, as calculated according to points (ii)-(v) below
$f_{j,t}$	is the Settlement Price of Underlying Contract j as of the Index Business Day t

(ii)   On the Disrupted Index Rebalance Day R, the Index Calculation Agent shall determine the Equivalent Holdings and the Equivalent Target Holdings with respect to the Index. The Equivalent Holdings is a set of holdings $\{H'_{1,R}, ..., H'_{m,R}\}$ which corresponds to the Underlying Contracts $\{F_1...F_m\}$ of the Index and perfectly describes the returns of the Index on the Disrupted Index Rebalance Day R. The Equivalent Target Holdings is a set of target holdings $\{TH'_{1,R}, ..., TH'_{m,R}\}$ for the Underlying Contracts, which perfectly describes the returns of the Index on the Index Business Day immediately following the Disrupted Index Rebalance Day R had the Market Disruption Event(s) not occurred. The Equivalent Holdings are a representation of the basket of Underlying Contracts underlying the Index on the Disrupted Index Rebalance Day R, and the Equivalent Target Holdings are a representation of the basket of Underlying Contracts that will underlie the Index on the Index Business Day immediately following the Disrupted Index Rebalance Day R had the Market Disruption Event(s) not occurred. The Equivalent Holdings and the Equivalent Target Holdings shall be determined for all Underlying Contracts, therefore some $H'_{j,R}$ and/or $TH'_{j,R}$ may have a value of 0.

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

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

Where:

$TH'_{j,R}$	means the Equivalent Target Holding of Contract j on Disrupted Index Rebalance Day R
$SCH_{j,t}$	means $\begin{cases} H'_{j,R} - TH'_{j,R} & if\ j\ is\ a\ Disrupted\ Contract;\ or \\ 0\ otherwise \end{cases}$
$H'_{j,R}$	means the Equivalent Holding of Contract j on Disrupted Index Rebalance Day R

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

(v)   For each Underlying Contract that is not a Disrupted Contract, the Equivalent Holding $H'_{j,t}$ on the Index Business Day immediately following the Disrupted Index Rebalance Day R shall be the Equivalent Target Holding.

(vi)   On the second consecutive non-disrupted Index Business Day immediately following the Disrupted Index Rebalance Day R, the Index Calculation Agent will resume calculation of the Index in accordance with Section 2.

The Index Levels on the Disrupted Index Rebalance Day and each disrupted Index Business Day not covered in the paragraphs above will be calculated in accordance with Section 2.

SECTION 4: WEIGHTING METHODOLOGY

On each Index Business Day, the Index generates a Weight (as defined below) for the Underlying Component that scales the exposure of the Index to the Underlying Component up or down based on the historic realized volatility of the Underlying Component and subject to a floor and a cap (the Minimum Leverage and Maximum Leverage).

When the historic weighted realized volatility of the Underlying Component is below the Target Volatility by more than the Volatility Distance Trigger, the exposure will be scaled up in line with the Target Volatility and subject to the Maximum/Minimum Leverage. If the historic realized volatility is above the Target Volatility by more than the Volatility Distance Trigger, the exposure will be scaled down in line with the Target Volatility and subject to the Maximum/Minimum Leverage.

WEIGHT CALCULATION

On each Holdings Calculation Day, R, the Weight of the Underlying Component, W_R, is calculated as:

$$W_R = \begin{cases} L_R, if \ |CurrentVol * CL_R - TargetVol| > VolDistanceTrigger \\ CL_R, otherwise \end{cases}$$

Where

CL_R is the Current Leverage of the Index on Holdings Calculation Day R rounded to eight decimal places and defined as:

$$CL_R = \frac{H_R * C_{R-1}}{I_{R-1}}$$

H_R is the Holding of the Underlying Component on Holdings Calculation Day *R.*

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

C_{R-1} is the Underlying Component Level on Index Business Day immediately preceding Holdings Calculation Day *R.*

L_R is the calculated leverage of the Underlying Component rounded to eight decimal places and is defined as:

$$L_R = \max(MinimumLeverage, \min \left(MaximumLeverage, \frac{TargetVol}{CurrentVol} \right))$$

$MaximumLeverage$ is the Maximum Leverage, as defined in the Definitions section.

$MinimumLeverage$ is the Minimum Leverage, as defined in the Definitions section.

$TargetVol$ is the Volatility Target, as defined in the Definitions section.

$CurrentVol$ is the greater of the short-term and long-term realized volatility of the Underlying Component, rounded to eight decimal places and defined as:

$$CurrentVol = \max(Vol_{R,ShortTermLookback,}^{C} Vol_{R,LongTermLookback,}^{C})$$

$ShortTermLookback$ is the Short Term Volatility Lookback, as defined in the Definitions section.

$LongTermLookback$ is the Long Term Volatility Lookback, as defined in the Definitions section.

$Vol_{R,Lookback}^{C}$ is the realized volatility over lookback $Lookback$ and is defined as:

$$Vol_{R,Lookback}^{C} = \sqrt{\frac{252}{Lookback - 1} \sum_{i=1}^{Lookback} \left(\left(\frac{C_{R-i}}{C_{R-i-1}} - 1 \right) - \frac{\sum_{i=1}^{Lookback} \left(\frac{C_{R-i}}{C_{R-i-1}} - 1 \right)}{Lookback} \right)^{2}}$$

C_{R-i} is the Underlying Component level in respect of the Index Business Day preceding the Holdings Calculation Day R by a number of Index Business Days equal to *i.*

C_{R-i-1} is the Underlying Component level in respect of the Index Business Day immediately preceding the Index Business Day that is preceding the Holdings Calculation Day R by a number of Index Business Days equal to *i.*

CONTACTS

For more information on the Macquarie Curve Carry Rotator 3% VT Index please contact:

Arun Assumall
Arun.Assumall@macquarie.com

Maia Mathieson
Maia.Mathieson@macquarie.com