

INDEX HANDBOOK

MUNICH RE
WORLD WIDE TREND INDEX

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Document History

1 October 2017	Index Live Date and document release
1 October 2019	Change O/N rate from EONIA <Index> to ESTRON <Index> + 8.5bps (see https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/euro_short-term_rate/html/eurostr_overview.en.html)

1. Overview

The MUNICH RE WORLD WIDE TREND INDEX (the “**Index**”) is a risk controlled version of the MUNICH RE WORLD WIDE TREND NON-RC INDEX (the “**Top-Level Index**”). This Index is comprised of 4 trend-following strategy sub-indices (the “**Sub-Indices**”). The Index, the Top-Level Index and its Sub-Indices are denominated in EUR.

“**Index Business Days**”, for the calculation of the Index, the Top-Level Index and its Sub-Indices, are all weekdays except Munich¹ holidays. Throughout the document, if “**t**” is an Index Business Day, then “**t-b**” refers to the preceding Index Business Day. In case of a holiday on the relevant futures exchange which is not a Munich holiday, the stale price from the prior available Index Business Day is used for the respective constituent.

The Index is calculated on a total return basis, whereas the Top-Level Index and its Sub-Indices are defined as excess return indices. The values of the Index, the Top-Level Index and its Sub-Indices are calculated on each Index Business Day t, and shall reflect constituent futures prices as of market close in Japan. Hence, for non-Japan listed index constituents, the futures price as of Index Business Day t is actually the settlement price of the relevant futures exchange as of the respective previous Futures Trading Day (as defined below).

The Index Live Date (the “**Index Live Date**”) is 2 October 2017. The Index Start Date is 28 December 1987 (the “**Index Start Date**”). The Index has an initial value of 100 EUR on its Index Start Date.

The level of the Index, as determined by the Index Calculation Agent (as defined below), will be reported on Bloomberg via the page MRWWTRND <Index> or any successor financial information service as defined by the Index Owner, in consultation with the Index Administrator (as defined below) in its sole and absolute discretion.

2. Index Calculation

2.1. Index Components

The index is initially starting with 30 “**Index Components**”, which are the futures markets (each a “**Future Series**”) listed in below table. The components on this list and the number of components may change in the future in accordance with chapter 3 of this handbook.

#	FUTURES NAME	Ticker Prefix ²	Ticker Extension ³	FX RATE X _i	ASSET CLASS ⁴
i=1	OSE 10YR JGB	JB	Comdty	JPY/EUR	Fixed Income
i=2	CME 10YR T-Note	TY	Comdty	USD/EUR	Fixed Income
i=3	CME 30YR T-Bond	US	Comdty	USD/EUR	Fixed Income
i=4	TMX 10YR CGB	CN	Comdty	CAD/EUR	Fixed Income
i=5	ICE Long Gilt	G	Comdty	GBP/EUR	Fixed Income
i=6	Eurex Euro-Bund	RX	Comdty	1	Fixed Income
i=7	Eurex Euro-Buxl	UB	Comdty	1	Fixed Income

¹ New Year’s Day, Epiphany, Shrove Tuesday, Good Friday, Easter Monday, Labour Day, Ascension Day, Whit Monday, Corpus Christi Day, Assumption Day, Day of German Unity, All Saints’ Day, Christmas Eve, Christmas Day, Christmas Holiday (St. Stephen’s Day), New Year’s Eve.

² Ticker as currently available on the market information service by Bloomberg L.P.

³ Ticker as currently available on the market information service by Bloomberg L.P.

⁴ CO: commodities, EQ: equities, FI: fixed income, FX: foreign exchange

i=8	OSE Nikkei 225	NK	Index	JPY/EUR	Equities
i=9	CME E-mini S&P 500	ES	Index	USD/EUR	Equities
i=10	CME E-mini NASDAQ-100	NQ	Index	USD/EUR	Equities
i=11	Eurex EURO STOXX 50	VG	Index	1	Equities
i=12	Eurex DAX	GX	Index	1	Equities
i=13	ICE FTSE 100	Z	Index	GBP/EUR	Equities
i=14	HKFE Hang-Seng	HI	Index	HKD/EUR	Equities
i=15	ICE Brent Oil	CO	Comdty	USD/EUR	Commodities
i=16	NYMEX Crude Oil	CL	Comdty	USD/EUR	Commodities
i=17	COMEX Gold	GC	Comdty	USD/EUR	Commodities
i=18	COMEX Copper	HG	Comdty	USD/EUR	Commodities
i=19	NYMEX Heating Oil	HO	Comdty	USD/EUR	Commodities
i=20	NYMEX Natural Gas	NG	Comdty	USD/EUR	Commodities
i=21	NYMEX Platinum	PL	Comdty	USD/EUR	Commodities
i=22	ICE LS Gas Oil	QS	Comdty	USD/EUR	Commodities
i=23	COMEX Silver	SI	Comdty	USD/EUR	Commodities
i=24	NYMEX RBOB Gasoline	XB	Comdty	USD/EUR	Commodities
i=25	CME Euro	EC	Curncy	USD/EUR	FX
i=26	CME Japanese Yen	JY	Curncy	USD/EUR	FX
i=27	CME Swiss Franc	SF	Curncy	USD/EUR	FX
i=28	CME British Pound	BP	Curncy	USD/EUR	FX
i=29	CME Canadian Dollar	CD	Curncy	USD/EUR	FX
i=30	CME Australian Dollar	AD	Curncy	USD/EUR	FX

Example: For $t = 04/28/2015$, the futures price $F_{j,i}[t]$ corresponds to CME settlement as of $04/27/2015$ for the Active Contract as of $04/27/2015$.

The month letter codes of the roll schedule are defined as follows:

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

2.2. Futures Roll Indices

A Futures Roll Index is a futures position continuously rolled in the Active Contract. A standard futures roll from the front contract into the next contract is performed two index business days before the futures contract's last trade or first notice date, respectively.

Each Futures Roll Index #i starts with a value of 100 and is denominated in the underlying futures currency. Currently daily settlement prices of the corresponding futures contracts are used to calculate the daily levels of the Futures Roll Indices.

2.3. Local Exchange Futures Roll Indices

A Local Exchange Futures Roll Index is a futures position continuously rolled in the Active Contract using the holiday calendar of the relevant futures exchange. Local Exchange Futures Roll Indices are calculated for all covered futures markets.

2.4. Sub-Indices

The Top-Level Index is comprised of four trend-following strategy Sub-Indices. The four Sub-Indices are using a different parameterization with regard to the momentum signal.

Each Sub-Index represents a momentum-based strategy applied to all members of the investment universe. For this purpose, on each Rebalancing Day the momentum signal is evaluated for each member. In the case of positive momentum a long position is established in the respective futures market. In the case of negative momentum, a short position is established in the respective futures market. Otherwise it is given a zero weight. Each Sub-Index started on the respective Index Start Date with a value of 100 EUR.

2.4.1. Rebalancing Process

Rebalancing Days

In general, the first Index Business Day t of each calendar month is a Rebalancing Day. Holidays on the individual exchanges can result in a different Rebalancing Day, which would always be the nearest day possible.

Momentum Signal

On each Rebalancing Day, the four momentum signals are calculated; signal 1 is based on 3 months of data, signal 2 is based on 6 months of data, signal 3 is based on 9 months of data and signal 4 is based on 12 months of data. The signal compares the current price level to the price level at the beginning of the time window.

Weight Determination

On a Rebalancing Day the Index Components' weights are reset so that all positions in the respective sub-index contribute the same amount of risk, expressed as standard deviation of daily log-returns, to the sub-index. The weights are rounded to four decimal places.

2.4.2. Calculation of the Sub-Indices

Using these weights the holdings in each of the individual index components are determined, and the sub-index value can be calculated.

2.5. Top-Level Index

The Top-Level Index combines the four Sub-Indices into one portfolio. The Sub-Indices are weighted inversely proportional to their volatility and the weightings are also implemented in the course of the monthly rebalancing process. The Top-Level Index started on its Index Start Date with a value of 100 EUR.

2.6. MUNICH RE WORLD WIDE TREND INDEX (the “Index”)

The Index is a risk controlled version of the Top-Level Index. The applied risk control mechanism uses volatilities aiming at matching option market volatilities (“implied volatility approach”; assumption: implied volatility trades at 1.2 times realized volatility). The target volatility is 5%. The theoretical leverage is capped at 300%. The time series started on its Index Start Date.

To carry out the risk control mechanism the current portfolio composition and fx-adjusted log-returns of the index members are used to calculate the volatility estimator. The index has an annual management fee of 40bps per annum. The interest component of the total return index (the “O/N interest income”) is added using the level of €STR (Bloomberg ticker: ESTRON <Index>) plus 0.085%⁵.

On the Index Start Date of the Index, the Index is initialized with 100 EUR. The daily closing price of the Index will be rounded to two decimal places.

Market Impact

Market impact of trades executed for the purpose of implementing the investment strategy are reflected in the performance of the Index. The market impact of a trade is calculated as the contract value traded times the tick size specified in the below table.

#	FUTURES NAME	Bloomberg Ticker Prefix	Bloomberg Ticker Extension	NT _i
i=1	OSE 10YR JGB	JB	Comdty	1
i=2	CME 10YR T-Note	TY	Comdty	1
i=3	CME 30YR T-Bond	US	Comdty	1
i=4	TMX 10YR CGB	CN	Comdty	2
i=5	ICE Long Gilt	G	Comdty	1
i=6	Eurex Euro-Bund	RX	Comdty	1
i=7	Eurex Euro-Buxl	UB	Comdty	2
i=8	OSE Nikkei 225	NK	Index	1
i=9	CME E-mini S&P 500	ES	Index	1
i=10	CME E-mini NASDAQ-100	NQ	Index	1
i=11	Eurex EURO STOXX 50	VG	Index	1
i=12	Eurex DAX	GX	Index	1
i=13	ICE FTSE 100	Z	Index	1
i=14	HKFE Hang-Seng	HI	Index	1
i=15	ICE Brent Oil	CO	Comdty	1
i=16	NYMEX Crude Oil	CL	Comdty	1
i=17	COMEX Gold	GC	Comdty	1

⁵ Before 1 October 2019, the EONIA O/N rate (Bloomberg ticker: EONIA Index) has been used for this purpose.

i=18	COMEX Copper	HG	Comdty	2
i=19	NYMEX Heating Oil	HO	Comdty	2
i=20	NYMEX Natural Gas	NG	Comdty	2
i=21	NYMEX Platinum	PL	Comdty	2
i=22	ICE LS Gas Oil	QS	Comdty	2
i=23	COMEX Silver	SI	Comdty	2
i=24	NYMEX RBOB Gasoline	XB	Comdty	2
i=25	CME Euro	EC	Currency	1
i=26	CME Japanese Yen	JY	Currency	1
i=27	CME Swiss Franc	SF	Currency	2
i=28	CME British Pound	BP	Currency	2
i=29	CME Canadian Dollar	CD	Currency	2
i=30	CME Australian Dollar	AD	Currency	2

Index Calculation

The risk controlled Index leverages the Top-Level Index and reflects the O/N interest income (atc/360), the fee deduction (atc/360) and the market impact. On the Index Start Date, the Index is initialized with 100 EUR.

2.7. Accuracy

The daily closing price of the Index will be rounded to two decimal places.

3. Index Principles

The Index is intended to reflect the performance of the investment strategy as defined in this handbook. The Index is denominated in EUR. The investment universe comprises of 30 markets from 4 asset classes (bonds, equities, commodities, currencies). A trend-following investment strategy is controlling the exposure to the individual markets. The portfolio is rebalanced and risk managed on a daily basis, repositionings may happen on a monthly basis. The Index is aiming at realizing a volatility of 5% per annum, as described in section 2.6.

4. Index Owner

The Index Owner is Munich Reinsurance Company (“**Munich Re**” or “**Index Owner**”). The Index Owner will retain 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.

The Index Owner has appointed an independent Index Administrator and an independent Index Calculation Agent to maintain and calculate the Index. The Index Owner may in the future terminate the appointment of the Index Calculation Agent and/or the Index Administrator and appoint a replacement Index Administrator or Index Calculation Agent.

5. Index Administrator / Index Calculation Agent

The Index Owner has entrusted the day-to-day management and maintenance of the Index to an independent Index Administrator and an independent Index Calculation Agent.

The Index Administrator and the Index Calculation Agent is currently Solactive AG.

The Index Administrator and the Index Calculation Agent will maintain and employ the rules, procedures and methodology described in this document. This includes the implementation of changes to the Index and/or to the methodology under the instruction of the Index Committee (as defined below). The Index Calculation Agent is responsible for the publication of the values of the Index determined by it as well as any further publication in relation to the Index.

Subject to the terms set out in this document, any determination by the Index Calculation Agent will be made in its sole and absolute discretion by reference to such factors as it deems appropriate at such time. Any such determination by the Index Calculation Agent will, in the absence of manifest error, be final, conclusive and binding.

No assurance can be given that market, regulatory, juridical or fiscal circumstances will not arise that would, in the view of the Index Committee, make a modification or change of the methodology necessary, which then would have to be implemented by the Index Administrator.

6. Calculation during Market Disruption Events and Index Adjustments

In its role as Index Administrator Solactive AG (acting as applicable through the Index Committee) may in accordance with the terms of this document, adjust the calculation of, delay, suspend or permanently cancel the Index and may have no obligation to continue the calculation, publication and dissemination of the Index. Any such calculation adjustment, delay, suspension, cancellation or non-publication may have a negative impact on any instruments linked to the Index.

6.1. Index Committee

The “**Index Committee**” is composed of staff from Solactive AG. The Index Committee is responsible to oversee the Index and the methodology described in this document.

It is the Index Committee’s aim to maintain the Index liquid and tradable. This includes the response to an Market Disruption Event, Index Modification and/or Index Correction (each as defined below), which will be implemented by the Index Administrator.

To meet its objectives, the Index Committee may – based on a defined set of internal rules - exercise limited discretion with respect to the modification the methodology described in this document in relation to either of the Index, including, but not limited to, in case an Index Modification and/or Index Correction (together “**Index Adjustments**”) or a Market Disruption Event has occurred.

In case of a reaction by the Index Committee on one of these circumstances, the proposed change(s) and action(s) in relation to the Index will be reported by the Index Committee to the Index Administrator. Any such change(s) or action(s) are publicly announced by the Index Administrator as outlined below.

6.2. Market Disruption Event

Local market disruptions can have a global effect. Market disruptions can severely adversely affect the performance of the Index.

If on any Index Business Day a Market Disruption Event (as defined in the 2002 ISDA Equity Derivatives Definitions) has occurred, the Index Administrator shall calculate the value of the Index for such Index Business Day using a value for the affected Index Component(s), which is determined by the Index Committee in its sole and absolute discretion, having regard to the then prevailing market conditions, the last reported trade price of such Index Component(s) and such other conditions that the Index Committee, in its sole and absolute discretion, determines relevant for the valuation of such Index Component(s).

A Market Disruption Event is defined as the occurrence or existence of (a) a Trading Disruption, (b) an Exchange Disruption, which in either case the Index Committee determines is material at any time during the one hour period that end at the relevant settlement time, or (c) an Early Closure (each as defined in the 2002 ISDA Equity Derivatives Definitions).

6.3. Index Adjustments

Index Modification

The Index is subject to certain modifications in situations, in which it is difficult or impossible for the Index Calculation Agent to calculate the value of the Index or to maintain the Index Principles with the chosen calculation parameters or variables and Index Components. Another reason for modifications includes situations, in which the index production costs increase, for example due to licensing issues, or situations, in which the index production costs can be decreased for example by using alternative data sources, which have at least the same quality as the replaced data source.

Consequently, the Index Committee may make discretionary decisions with regard to the calculation of the Index (including but not limited to changing the published methodology, make adjustments to the composition or calculation parameters and variables of the Index or the cancellation of the Index).

The Index Committee will make reasonable efforts to assure that such modifications, changes and replacements will result in a methodology that is consistent with the methodology described above.

Index Correction

If the Index Administrator determines that a material error has occurred in the calculation of the Index, the Top-Level Index and/or its Sub-Indices, resulting in publication of a materially inaccurate value of the Index, the Index Administrator may instruct the Index Committee to advise the Index Calculation Agent to calculate and publish a corrected value for the Index.

The Index Committee shall determine according to its internal rules, whether such corrected value of the Index shall for the purposes of the calculations of the Index apply from the date such correction is published or on a retrospective basis.

Publication of Index Adjustments

Changes to the Index Components or to the methodology of any of the Index as decided by the Index Committee and implemented by the Index Calculation Agent will be announced as promptly as is reasonably practicable and normally at least 60 Index Business Days prior to the effective date of such change(s).

Changes decided by the Index Committee and implemented by the Index Calculation Agent in response to Market Disruption Events will be announced by the Index Calculation Agent as promptly as it is reasonably practicable.

7. Historical Data

The values of the Index between the Index Start Date and the Index Live Date have been determined by reference to historical data and must be considered as simulated and thus purely hypothetical. It is provided as an illustration of how the Index would have performed during the period had the Index Calculation Agent began calculating the Index on the Index Start Date using the methodology described in this document. This data does not reflect actual performance, nor was a contemporaneous investment model run of the Index. Whilst any such methodology or assumption is, in the view of the Index Owner, reasonable, the use of historical data may result in material differences between the simulated performance of the Index, prior to the Index Live Date, and any subsequent actual performance. The Index history before the Index Live Date has been determined by the Index Owner and has only partially been verified by the Index Calculation Agent.

Historical levels of the Index for the period from and after the Index Live Date are calculated with reference to the official closing levels of the Index Components determined based on the latest available data published by the relevant futures exchanges and/or benchmark administrators and/or as delivered via the employed information systems.

Past performance of the Index is not a reliable guide to future performance and the past performance of the Index may have been determined on terms different to those described in this Index Handbook. No assurance, representation or warranty is given of the future performance of the Index or that it will achieve its objective. Instruments linked to the Index can fluctuate in price or value and prices, values or income may fall against the interests of any investor exposed to the performance of the Index. Changes in rates of exchange, rates of interest and prices of any Index Components, among other things, may have an adverse effect on the value of the Index.

8. Contact

8.1. Index Owner

The Index Owner can be contacted at the following address:

Munich Reinsurance Company
Financial Solutions
Königinstrasse 107
80802 Munich
Germany

Internet: <http://www.munichre.com>

8.2. Index Administrator

The Index Administrator can be contacted at the following address:

Solactive AG
Guiollettstrasse 54
60325 Frankfurt am Main
Germany

Internet: <http://www.solactive.com>

8.3. Index Calculation Agent

The Index Calculation Agent can be contacted at the following address:

Solactive AG
Guiollettstrasse 54
60325 Frankfurt am Main
Germany
Internet: <http://www.solactive.com>

9. Risk Provisions

Without prejudice to the Disclaimer in Section 9, regard should be had to the non-exhaustive risk factors below which describe events or circumstances that may affect the calculation and/or the performance of the Index and may be material for the purposes of assessing the risks associated with any investment related to the Index.

9.1. Nature of the Index

The Index is a rules-based formula that enables the value of the Index to be calculated from time to time. Although instruments may be issued or entered into whose return is linked to the performance of the Index, the Index is not itself an investment or instrument and does not give any person any entitlement to, or ownership interest in, any Index Components or any other obligation or asset referenced (directly or indirectly) by the Index.

9.2. Potential Conflicts of Interest

Potential conflicts of interest may exist in the internal teams, divisions or entities of the Munich Re Group. For example, one team may make determinations and take actions in relation to the Index in its capacity as Index Owner, while another team within the organisation may issue or promote/sell products linked to the Index.

In addition, a further team within the organisation may have trading positions in or relation to instruments and assets to which the performance of the Index is directly or indirectly linked (including any Index Component). No entity within the Munich Re Group shall have any duty or obligation to take into account any impact in the performance of the Index when effecting transactions in such instruments and assets.

9.3. Risks associated with an investment in instruments linked to the Index

Counterparty Risk

Instruments linked to the Index may be exposed to counterparty credit risk. If an entity trades, enters into or issues any such instruments and becomes insolvent it may not be able to meet all of its payment obligations.

Interaction Risk

The value of the Index is based on the performance of different investment types. Different types of financial risk may interact unpredictably on these investments, particularly in times of market stress.

Tax

The value of the Index may be reduced to account for certain taxes and other deductions and therefore, may impact the performance of the Index and returns on any instruments linked to the Index.

Duty of Care

Subject always to their regulatory obligations and except as may be required by applicable law, neither the Index Owner, the Index Administrator (including where it acts through the Index Committee) nor the Index Calculation Agent shall have a duty of care or any fiduciary duty to any person in respect of the Index including any investor in any instrument linked to the Index. Neither the Index Owner, the Index Administrator nor the Index Calculation Agent is acting as an investment adviser or manager or providing advice of any nature in relation to the Index or any instrument linked to the Index.

Other Risks

There is no guarantee, warranty or assurance that this document discloses all possible factors that may affect the performance of the Index and the risks of investing in any instrument that is linked to the Index.

Before investing in any such instrument, you must satisfy yourself that you fully understand the risks of such investment and you are solely responsible for making an independent appraisal of and investigation into the Index and should not rely on this document as constituting investment advice.

10. DISCLAIMER

THE INDEX OWNER, THE INDEX ADMINISTRATOR AND THE INDEX CALCULATION AGENT MAY EACH BE SUBJECT TO A NUMBER OF CONFLICTS OF INTEREST IN CONNECTION WITH THEIR ROLE AND SERVICES PERFORMED WITH RESPECT TO THE INDEX. IN THE EVENT THAT SUCH CONFLICTS ARISE, THE INDEX OWNER, THE INDEX CALCULATION AGENT AND THE INDEX ADMINISTRATOR SHALL USE THEIR REASONABLE ENDEAVOURS TO RESOLVE SUCH CONFLICTS OF INTEREST FAIRLY (HAVING REGARD TO THEIR RESPECTIVE OBLIGATIONS AND DUTIES).

ALTHOUGH THE INDEX OWNER, THE INDEX ADMINISTRATOR AND THE INDEX CALCULATION AGENT, AS APPLICABLE, WILL EACH OBTAIN INFORMATION FOR INCLUSION IN OR FOR USE IN THE PROVISION OF THE INDEX FROM SOURCES WHICH THE INDEX OWNER OR THE INDEX ADMINISTRATOR CONSIDERS RELIABLE, NEITHER THE INDEX OWNER NOR THE INDEX ADMINISTRATOR NOR THE INDEX CALCULATION AGENT WILL INDEPENDENTLY VERIFY SUCH INFORMATION AND OR GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE INDEX OR ANY DATA INCLUDED THEREIN. THE INDEX IS COMPILED BY THE INDEX ADMINISTRATOR AND CALCULATED BY THE INDEX CALCULATION AGENT. POTENTIAL INVESTORS SHOULD BE AWARE THAT THE INDEX ADMINISTRATOR HAS A NUMBER OF SIGNIFICANT DISCRETIONS IN RELATION TO THE PROVISION OF THE INDEX.

THE INDEX OWNER, ANY OF ITS AFFILIATES, THE INDEX ADMINISTRATOR OR THE INDEX CALCULATION AGENT DO NOT MAKE ANY EXPRESS OR IMPLIED WARRANTY OR REPRESENTATION WHATSOEVER AS TO (A) THE ADVISABILITY OF PURCHASING OR ASSUMING ANY RISK IN CONNECTION WITH ANY TRANSACTIONS ANY INVESTMENTS OR TRADING PRODUCTS OR STRATEGIES BASED ON, INDEXED TO OR OTHERWISE RELATED TO THE INDEX, (B) THE RESULTS TO BE OBTAINED FROM THE USE OF THE INDEX OR ANY DATA INCLUDED THEREIN IN CONNECTION WITH ANY LICENSED RIGHTS OR FOR ANY OTHER USE, (C) THE LEVEL AT WHICH THE INDEX STANDS OR WILL STAND, ANY INDEX COMPONENT, OR THE WEIGHT OF ANY INDEX COMPONENT AT ANY PARTICULAR TIME ON ANY PARTICULAR DAY OR (D) ANY OTHER MATTER. NEITHER THE INDEX OWNER NOR ANY OF ITS AFFILIATES MAKES ANY EXPRESS OR IMPLIED REPRESENTATIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INDEX OR ANY DATA INCLUDED THEREIN. A POTENTIAL INVESTOR IN, OR COUNTERPARTY TO, PRODUCTS BASED ON THE INDEX HAS NO DIRECT RECOURSE TO EITHER THE INDEX OWNER OR ANY OF ITS AFFILIATES AND THE CHARACTERISTICS AND RISKS ASSOCIATED WITH SUCH PRODUCTS ARE AVAILABLE IN THE PRODUCT RELATED DOCUMENTS.

THE INDEX CALCULATION AGENT AND THE INDEX ADMINISTRATOR SHALL NOT BE LIABLE (IN NEGLIGENCE OR OTHERWISE) TO ANY PERSON FOR ANY ERROR IN THIS INDEX, OR ANY DELAY OR OMISSION OR FOR THE QUALITY, ACCURACY, TIMELINESS AND/OR COMPLETENESS OF THIS DOCUMENT AND IT SHALL NOT BE UNDER ANY OBLIGATION TO ADVISE ANY PERSON OF THE FOREGOING. WITHOUT LIMITING ANY OF THE FOREGOING, NEITHER THE INDEX CALCULATION AGENT NOR THE INDEX ADMINISTRATOR SHALL HAVE IN ANY EVENT ANY LIABILITY (WHETHER IN NEGLIGENCE OR OTHERWISE) TO ANY PERSON FOR ANY INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS) EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

THE INDEX OWNER, THE INDEX ADMINISTRATOR AND THE INDEX CALCULATION AGENT DO NOT AUTHORISE, ENDORSE, RATIFY OR OTHERWISE RECOMMEND THE INDEX COMPONENTS AND ACCEPTS NO LIABILITY OR RESPONSIBILITY WHATSOEVER FOR THE LEVELS AT WHICH THE INDEX COMPONENTS STAND AT ANY PARTICULAR TIME ON ANY PARTICULAR DATE OR THE RESULTING PERFORMANCE OF THE INDEX.

THE SPONSORS OF ANY OF THE INDEX COMPONENTS (INCLUDING SPONSORS OF ANY INDICES THAT MAY BE A COMPONENT OF AN INDEX COMPONENT) ARE NOT RESPONSIBLE FOR AND HAVE NOT AND WILL NOT PARTICIPATE IN THE DETERMINATION OF THE COMPOSITION OF THE INDEX, INCLUDING ANY CALCULATIONS USED THEREOF AT ANY TIME AND THEY HAVE NO OBLIGATION OR LIABILITY IN CONNECTION WITH THE ADMINISTRATION RELATING TO THE INDEX. ANY DISCLAIMER RELATING TO EACH OF THE INDEX COMPONENTS (INCLUDING ANY INDICES THAT MAY BE A COMPONENT OF ANY INDEX COMPONENT) IS DEEMED TO BE INCORPORATED HEREIN AND SHALL APPLY TO THE INDEX RULES.