



# J.P.Morgan

Date: 21 December 2017  
To: BANK VONTOBEL AG  
Attention: Kevin Phan  
Facsimile Number: OTCMO@vontobel.ch  
JPMorgan Deal / Trade References: 85000BH-EW205/EBH-14R3XX

## **Index Swap Transaction Confirmation**

The purpose of this letter (this "Confirmation") is to confirm the terms and conditions of the Swap Transaction entered into between: **J.P. Morgan Securities plc ("JPMorgan")** and BANK VONTOBEL AG (the "**Counterparty**") on the Trade Date and identified by the JPMorgan Deal Number specified below (the "Transaction"). This letter agreement constitutes a "Confirmation" as referred to in the Master Agreement specified below, and supersedes any previous confirmation or other writing with respect to the transaction described below.

The definitions and provisions contained in the 2006 ISDA Definitions (the "Swap Definitions") and in the 2002 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), each as published by the International Swaps and Derivatives Association, Inc. ("ISDA") are incorporated into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Swap Definitions will prevail. In the event of any inconsistency between the Definitions and this Confirmation, this Confirmation will govern.

This Confirmation supplements, forms part of, and is subject to, the ISDA Master Agreement dated as of 25 November 2013, as amended and supplemented from time to time (the "Agreement"), between JPMorgan and the Counterparty. All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

The terms of the particular Swap Transaction to which this Confirmation relates are as follows:

USI: 1030244641PCMCMA0000000000000000BSZYPKG0A; UTE: 1030244641PCMCMA0000000000000000BSZYPKG0A

Deal Ref/Trade Ref: 85000BH-EW205/EBH-14R3XX

Page 1 of 13

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## General Terms:

Instrument:	Index Swap (the “Swap” or “Transaction”)
Trade Date:	15 December 2017
Effective Date:	15 December 2017
Final Fixing Date:	21 December 2018, subject to the occurrence of a Market Disruption Event and the applicable Consequences of a Market Disruption Event below.
Termination Date:	The Final Cash Settlement Date, subject to the Optional Early Termination provision below.
Calculation Period(s):	In respect of each Valuation Date <sub>t</sub> other than the Final Fixing Date, the period from but excluding such Valuation Date <sub>t</sub> to and including the Valuation Date immediately following such Valuation Date <sub>t</sub> .
Number of Units:	15,850
Notional Amount:	Means, for the Calculation Period in respect of the Effective Date, the Number of Units multiplied by Index <sub>start</sub> in the Settlement Currency (equal to USD 3,967,572.00).  For each Calculation Period in respect of a Valuation Date <sub>t</sub> other than the Effective Date or the Final Fixing Date, the Notional Amount (NA <sub>t</sub> ) will be an amount in the Settlement Currency equal to:

$$NA_t = NU \times Index_{t-1}$$

Where:

“NU” means Number of Units.

“Index<sub>t-1</sub>” as specified below.

“Index<sub>start</sub>” as specified below.

Business Days:	London, New York
Index:	The J.P. Morgan Helix 2 Index (USD) (Bloomberg Ticker: JHLXH2US <Index>)  The rules governing the calculation and maintenance of the Index are attached in Annex 1. These current index rules may be updated from time to time (such latest version, the “Index Rules”).
Index Calculation Agent:	As set out in the Index Rules.
Index Sponsor:	As set out in the Index Rules.
Index <sub>t</sub> :	Means, with respect to any Valuation Date <sub>t</sub> , the Index Level as of such Valuation Date <sub>t</sub> .
Index <sub>t-1</sub> :	Means, with respect to any Valuation Date <sub>t</sub> other than the Effective Date, where Index <sub>t-1</sub> is not applicable, the Index Level as of the Valuation Date immediately preceding such Valuation Date <sub>t</sub> .
Index <sub>Start</sub> :	250.3200 The Index Level as of the Effective Date.
Index Level:	Means the Index Level as defined in the Index Rules, subject to the occurrence of a Market Disruption Event and the applicable Consequences of a Market Disruption Event below.
Valuation Date or Valuation Date:	(a) Each Valuation Date specified in Schedule 1 hereto, and (b) in the case of an Optional Early Termination (as described further in the section “Optional Early Termination” below), the Optional Early Valuation Date,  in each case subject to the occurrence of a Market Disruption Event and the applicable Consequences of a Market Disruption Event below.



Exchange(s): Not Applicable

Related Exchange(s): All Exchanges, provided that any reference set out in Section 1.26 of the Equity Definitions to "Index" should be replaced by the words "Relevant Constituent".

**Index Amount Details:**

Index Amount Payer: JPMorgan

Index Amount Receiver: The Counterparty

Index Amount Payment Date(s): Each Cash Settlement Payment Date

Index Amount: In respect of any Valuation Date<sub>t</sub> other than the Effective Date, the Calculation Agent shall determine the Index Amount as an amount in the Settlement Currency in accordance with the following formula:

$$\text{Index Amount}_t = \text{NU} \times [\text{Index}_t \times (1 - \text{exitAdj}) - \text{Index}_{t-1}]$$

Where:

"NU" is as specified above.

"Index<sub>t</sub>" is as specified above.

"Index<sub>t-1</sub>" is as specified above.

"exitAdj" means 0% in respect of the Optional Early Valuation Date or the Final Fixing Date, and 0 otherwise.

If the Index Amount is:

- (i) a positive amount, as determined by the Calculation Agent, then the Index Amount Payer shall pay to the Index Amount Receiver an amount equal to the Index Amount, calculated in accordance with the formula above on the relevant Cash Settlement Payment Date;
- (ii) a negative amount, as determined by the Calculation Agent, then the Index Amount Receiver shall pay the Index Amount Payer an amount equal to the absolute value of the Index Amount, calculated in accordance with the formula above on the relevant Cash Settlement Payment Date; or
- (iii) zero, as determined by the Calculation Agent, then no Index Amount shall be payable by either party.

"Index<sub>t</sub> × (1 - exitAdj)" will be rounded to 2 decimal places.

**Entry Adjustment Amount Details:**

Entry Adjustment Amount Payer: The Counterparty

Entry Adjustment Amount Payment Date: 2 (two) Currency Business Days after the first Valuation Date after the Effective Date



Entry Adjustment Amount: In respect of the Effective Date, the Calculation Agent shall determine the Entry Adjustment Amount as an amount in the Settlement Currency in accordance with the following formula:

$$\text{Entry Adj Amount}_{t_2} = \text{NU} \times \text{Index}_{\text{start}} \times \text{entryAdj}$$

Where:

"NU" is as specified above.

"Index<sub>start</sub>" is as specified above.

"entryAdj" means 0.075%

#### Fixed Amount Details:

Fixed Amount Payer: The Counterparty

Fixed Amount Payment Date(s): Each Cash Settlement Payment Date

Fixed Amount: In respect of any Valuation Date<sub>t</sub> other than the Effective Date, the Calculation Agent shall determine the Fixed Amount in the Settlement Currency in accordance with the following formula:

$$\text{Fixed Amount}_{t_2} = \text{fix} \times n \times 365 \times \text{NU} \times \text{Index}_{t-1}$$

Where:

"fix" means 0.70%

"n" means the number of calendar days in the Calculation Period.

"NU" is as specified above.

"Index<sub>t-1</sub>" is as specified above.

#### Settlement Terms:

Cash Settlement: Applicable

Settlement Currency: USD

Cash Settlement Payment Date(s): In respect of any Valuation Date<sub>t</sub> other than the Effective Date, 2 (two) Currency Business Days after:

- (i) if no Market Disruption Event occurs on Valuation Date<sub>t</sub>, such Valuation Date, or
- (ii) if a Market Disruption Event occurs on Valuation Date<sub>t</sub>, the latest Postponed Determination Date (as further described in the section "Consequences of a Market Disruption Event" below) for an Affected Constituent in respect of such Valuation Date.

In respect of this Transaction and the Final Fixing Date the corresponding Cash Settlement Payment Date shall be deemed to be the final Cash Settlement Payment Date (the "**Final Cash Settlement Date**"), subject to the provisions set out in Section Optional Early Termination below.

Business Day Convention: Modified Following

Currency Business Day: Means any day on which commercial banks are open for business (including dealings in foreign exchange and foreign currency deposits) in New York

**Index Adjustment Event:**

Index Cancellation:	Cancellation and Payment
Index Modification:	Cancellation and Payment
Index Disruption:	Not Applicable

**Market Disruption Events:**

Consequences of a Market Disruption Event: If a Market Disruption Event (as defined below) occurs or is continuing on any Valuation Date, the Calculation Agent shall determine the Index Level in respect of such Valuation Date, by reference to the official settlement prices determined in clauses (i) and (ii) below and using the then-current method for calculating the Index Level last in effect prior to the scheduled date of determination:

- (i) with respect to the Relevant Constituent(s) which is/are not affected by the occurrence and/or existence of a Market Disruption Event (the **"Non Affected Constituent(s)"**), the official settlement price(s) in respect of such Non Affected Constituent(s) as of such Valuation Date; and
- (ii) with respect to the Relevant Constituent(s) which is/are affected by the occurrence and/or existence of a Market Disruption Event (the **"Affected Constituent(s)"**), the official settlement price(s) in respect of such Affected Constituent(s) as of the first Constituent Business Day following such Valuation Date, on which no Market Disruption Event in respect of the Affected Constituent(s) is occurring or existing (such day, a **"Postponed Determination Date"**), provided that the Postponed Determination Date has occurred on or prior to the fifth Constituent Business Day following such Valuation Date (the **"Cut Off Date"**). In the event that such Postponed Determination Date has not occurred on or prior to the Cut Off Date, then the Calculation Agent shall determine the value in respect of such Affected Constituent(s) to be used in calculating the Index Level in good faith and in a commercially reasonable manner in respect of the Constituent Business Day immediately following the Cut Off Date and such day shall be deemed to be the Postponed Determination Date.

**"Constituent Business Day"** means, in respect of a Relevant Constituent, any day on which the Related Exchange for such future contract and/or option is scheduled to be open for trading for its regular trading session.

**"Relevant Constituent"** means, as applicable, in respect of the Index:

- (i) any future contract or option contract referenced either by the Index, by a constituent or component of the Index, or by any constituent or component thereof; and
- (ii) any future contract underlying such option contract defined in (i) above, as applicable.

**"Disrupted Day"** means any Business Day on which a Market Disruption Event has occurred or is continuing.

**"Market Disruption Event"** means (as determined by the Calculation Agent in its sole discretion, but acting in good faith and commercially reasonable manner):

- (i) A material limitation, suspension, or disruption of trading in one or more of the Relevant Constituents;



- (ii) The official settlement price in respect of a Relevant Constituent is a “limit price”, meaning that the official settlement price in respect of the Relevant Constituent has increased or decreased from the previous day’s official settlement price by the maximum amount permitted under the rules of the Related Exchange on which such Relevant Constituent is traded;
- (iii) Failure by the Related Exchange or other price source to announce or publish the official settlement price in respect of a Relevant Constituent; or
- (iv) The failure by the Index Calculation Agent to publish the Index Level on any Business Day within the scheduled or usual timeframe for publication.

### **Optional Early Termination Provisions:**

Optional Early Termination: Notwithstanding any other termination provision contained in the Agreement and so long as no Termination Event or Event of Default (as defined in the Agreement) shall have occurred and then be continuing with respect to either party, Counterparty (the **“Terminating Party”**) may give irrevocable notice (an **“Optional Early Termination Notice”**) (which will be oral telephonic notice, if practicable, and otherwise written notice) no later than 3pm London time on any Notice Date (as defined below) of an early termination of this Transaction in whole or in part (an **“Optional Early Termination”**).

If an Optional Early Termination Notice is given after 3pm London time on any London Business Day, then such Optional Early Termination Notice shall be deemed to be delivered on the next following London Business Day. The Terminating Party shall state in such Optional Early Termination Notice whether this Transaction is to be terminated in whole or only in part and, in the case of a partial termination, that portion of the Transaction which is subject to such partial termination.

Upon the occurrence of an Optional Early Termination Notice, the Calculation Agent shall calculate the Optional Early Termination Amount (as defined below) which will be determined in accordance with the provisions set out in this Confirmation, in respect of the Business Day immediately following the Optional Early Termination Notice (the **“Optional Early Valuation Date”**). The Optional Early Termination Amount in respect of whole or portion of the Transaction which is terminated (as applicable) shall be paid to the relevant party in accordance with the Settlement Terms set out in this Confirmation. The Cash Settlement Payment Date in respect of the Optional Early Valuation Date will constitute the early termination date (the **“Optional Early Termination Date”**) in respect of the Transaction if terminated in whole, or in respect of the portion of the Transaction which has been terminated.

In the event of a partial Optional Early Termination of the Transaction, the Calculation Agent will make such adjustments to the Notional Amount, Cash Settlement Payment Dates, Index Amount, or any other variable relevant to the settlement or payment terms of this Transaction as it in good faith determines appropriate to take account of such partial Optional Early Termination.

**“Notice Date”** means any London Business Day from, and excluding, the Effective Date to, and including, two London Business Days immediately preceding the Final Fixing Date.

**“Optional Early Termination Amount”** means the Index Amount in respect of the Optional Early Valuation Date.



**Additional Disruption Events:**

Change in Law:	Applicable; provided that Section 12.9(a)(ii) of the Equity Definitions is hereby replaced in its entirety by the following:  “Change in Law” means that, on or after the Trade Date (A) due to the adoption of or any change in any applicable law or regulation (including, for the avoidance of doubt and without limitation, (x) any tax law or (y) adoption or promulgation of new regulations authorized or mandated by existing statute), or (B) due to the promulgation of or any change, announcement or statement of the formal or informal interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law or regulation (including any action taken by a taxing authority), a party to the Transaction determines in good faith that (X) it has become, or will become within 30 calendar days following the date of such determination but prior to the Termination Date, illegal to hold, acquire or dispose of Hedge Positions relating to such Transaction or (Y) it has incurred, or will incur within 30 calendar days following the date of such determination but prior to the Termination Date, a materially increased cost in performing its obligations under, or holding, acquiring or disposing of any Hedge Positions relating to, the Transaction (including, without limitation, due to any increase in tax liability, decrease in tax benefit or other adverse effect on its tax position).
Hedging Disruption:	Applicable; provided that Section 12.9(a)(v) of the Equity Definitions is hereby replaced in its entirety by the following:  “Hedging Disruption” means that the Hedging Party is unable, after using commercially reasonable efforts, to either (A) acquire, establish, re-establish, substitute, maintain, unwind or dispose of any Hedge Position(s) it deems necessary to hedge any relevant price risk of entering into and performing its obligations with respect to the Transaction (including, without limitation and for the avoidance of doubt, any synthetic equity borrowing transaction, if applicable) or (B) freely realize, recover, receive, repatriate, remit or transfer the proceeds of any such Hedge Position(s).  Hedging Party: JPMorgan and its affiliates
Increased Cost of Hedging:	Applicable; references to “equity price risk” in Section 12.9(a)(vi) of the Equity Definitions shall be deemed to be references to “any relevant price risk”.
Determining Party:	For all events JPMorgan
Non-Reliance:	Applicable
Agreements and Acknowledgements Regarding Hedging Activities:	Applicable
Index Disclaimer:	Applicable
Additional Acknowledgements:	Applicable
Documentation:	ISDA Master Agreement and Confirmation incorporating the ISDA Definitions and the Equity Definitions.
Governing Law:	As set out in the ISDA Master Agreement

**Offices:**

JPMorgan:	JPMorgan is acting through its London branch for the purposes of this Transaction.
Counterparty:	Counterparty is acting through its Zurich Office for the purposes of this Transaction.



## Calculation Agent and Dispute Resolution Procedures:

Calculation Agent: JPMorgan

Dispute Resolution Procedures: JPMorgan, however, where the Counterparty disputes any determination, calculation or estimate made by the Calculation Agent (the “**Dispute**”), then the Counterparty shall notify JPMorgan (the “**Dispute Notice**”) within one (1) London Business Day from the receipt of the original calculation (the “**Original Calculation**”) made by the Calculation Agent and where the Dispute cannot be resolved between the Calculation Agent and the Counterparty within twenty-four hours from the receipt of the Dispute Notice (the “**First Deadline**”), then

- (i) the relevant party shall pay the amount, if any, that is not subject to a dispute matter and
- (ii) the parties shall appoint, within two (2) London Business Days from the First Deadline (the “**Second Deadline**”), an independent third party that would qualify as a Reference Market-maker (a “**Substitute Calculation Agent**”) to resolve the Dispute within three (3) London Business Days from its appointment.

The determination of the Substitute Calculation Agent shall be final and binding absent manifest error. If the parties cannot agree on a Substitute Calculation Agent within the Second Deadline, each party shall elect an independent Reference Market-maker within two (2) London Business Days from the Second Deadline and such two Reference Market-makers shall jointly appoint a third Reference Market-maker which shall be deemed to be the Substitute Calculation Agent which will resolve the Dispute within three (3) London Business Days from its appointment. If no binding determination, adjustment or calculation is established as to a disputed matter in accordance with the procedures set forth in this paragraph, then the Original Calculation shall be binding. The parties shall equally share the costs, fees and expenses (if any) of any Reference Market-makers called upon to resolve a dispute and agree to waive any claim that they might otherwise have against any Reference Market-makers for any determination, adjustment or calculation made in good faith pursuant to this paragraph.

## Independent Amount:

Independent Amount: not applicable

## Other Provisions:

- (i) Time of Dealing: The time of dealing will be confirmed by JPMorgan upon written request.
- (ii) Retail Client: Each party represents that it is not a retail client as defined in the Rules of the Financial Conduct Authority.
- (iii) Authority: The Counterparty has no authority to enter into any agreement or to make any representations on behalf of JPMorgan, its affiliates and subsidiaries with or to any third party, and the Counterparty agrees that neither it nor anyone else acting on its behalf will purport to do so.
- (iv) Other Transactions: Each party represents to the other that it understands and acknowledges that the other party may, either in connection with entering into the Transaction or from time to time thereafter, engage in open market transactions that are designed to hedge or reduce the risks incurred by it in connection with such Transaction and that the effect of such open market transactions may be to affect or reduce the value of such Transaction.
- (v) Third Parties Rights: A person who is not a party to this Confirmation has no right under the Contracts (Rights of Third Parties) Act 1999 to enforce or enjoy the benefit of any of the terms of this Confirmation.
- (vi) Operational Data: On Counterparty’s request (the “**RFP Data Notice**”), JPMorgan shall, on a best effort basis, disclose to Counterparty position data regarding the Index, including, without limitation, any component, sub-components and any other constituents of the Index (and their outstanding exposure) (the “**RFP Data**”).





JPMorgan should disclose to Counterparty the RFP Data within one London Business Day after the RFP Data Notice addressed by Counterparty to JPMorgan. Counterparty acknowledges and represents that the RFP Data is confidential information (the “**Confidential Information**”) and it will not disclose the RFP Data to any third party, provided that the Counterparty may reveal the Confidential Information only to the Counterparty’s service providers who need to know the Confidential Information strictly for the purpose of the Transaction and who, prior to receipt of any Confidential Information, shall agree to keep such Confidential Information confidential. The Calculation Agent and/or JPMorgan are not making any representations or warranty as to the accuracy or completeness of the RFP Data, JPMorgan and its affiliates their directors, officers and employees, and representatives shall have no liability to the Counterparty, or anyone else as a result of their respective use of the RFP Data.

- (vii) **Capacity:** The Counterparty represents that (a) it has the requisite capacity to enter into this Transaction and that it has obtained all requisite approvals and authorisations, (b) its entering into this Transaction does not violate any law or regulation of any relevant jurisdiction applicable to it and that, to the best of its knowledge, understanding and belief, the entering into this Transaction and the purpose of entering this Transaction is permissible under such laws or regulations, and (c) it has determined, based on its own independent review and such professional advice as it has deemed appropriate under the circumstances, that its entering into this Transaction (I) is fully consistent with its financial, accounting, tax and reporting needs, objectives and condition, (II) the execution of this Transaction, including the Index Rules and any ancillary documentation complies and is fully consistent with all investment policies, guidelines and restrictions (including but not limited to all internal investments policies and any other applicable internal rules) applicable to it and it is not in violation of any internal policies, internal investment guidelines, investment activities and/or any other internal rules applicable to it (III) is a fit, proper and suitable transaction for it.
- (viii) **Information:** The Counterparty represents that it has received copies of the Index Rules and all index rules in respect of each Constituent within the Index and such other information as it deems necessary to make its decision to enter into the Transaction and that it has read and understands all such information (or has been afforded the opportunity to obtain such documents and information and has not taken the opportunity to do so).
- (ix) **Inequality of Information:** The Counterparty acknowledges that, despite having received from JPMorgan a copy of the Index Rules and all the index rules regarding the Constituents of the Index, JPMorgan, as the creator of the Index and the Constituents and acting as Index Sponsor, may possess and/or acquire non-public information with respect to the Index and any of the current Constituents within the Index that JPMorgan may or may not share with the Counterparty. Therefore, at any given time, the information possessed in respect of the Index by each of the Counterparty and JPMorgan may not be equal.
- (x) **Complex Risks and Potential Losses:** The Counterparty represents that it understands that the Transaction is subject to a very high degree of complex risks which may arise without warning, may at times be volatile, and that losses may occur quickly and in unanticipated magnitude and may result in losses in an amount equal to or even greater than the Notional Amount because potential losses are not limited in any way and the Counterparty acknowledges and agrees that it has a valid business purpose for entering into the Transaction, and has concluded (if necessary, in conjunction with its own legal, tax, accountancy, regulatory, investment or other professional advisers) that entering into the Transaction is suitable in light of its own investment objectives, financial capabilities and expertise.
- (xi) **Not an Adviser or a Fiduciary:** Neither JPMorgan nor any of its affiliates has provided any advice that has formed or may form a primary basis for any decision to enter into or otherwise regarding the Transaction by or on behalf of the Counterparty or is otherwise an adviser or fiduciary with respect to the Counterparty (including, without limitation, by virtue of JPMorgan’s or any of its affiliates’ reservation or exercise of any rights JPMorgan may have in connection with the Agreement or the Transaction or in connection with the Index).
- (xii) **Additional Representations:** The Counterparty represents and warrants that (a) the entering into the Agreement, (b) the entering into this Transaction and any other ancillary documentation, (c) the assets transferred to JPMorgan as credit support (if any), and (d) the Credit Support Document under the Agreement are in compliance with the applicable local laws, its investment strategy and investment plan and all applicable internal resolutions and authorizations of the Counterparty, and that the Counterparty has full power, authority and capacity to execute this Transaction and any other ancillary documentation.
- (xiii) **Calculation Agent Determinations:** The Calculation Agent shall not be responsible for any loss or damage due to a failure by the Calculation Agent to fulfil its obligations hereunder if such failure is caused by, or is directly or indirectly due to, war damage, terrorist or enemy action, the act of any government or other



competent authority, riot, civil commotion, rebellion, storm, tempest, accident, fire, strike or other similar cause beyond the control of the Calculation Agent.

**(xiv) Relationship between Parties: Each party represents to the other party regarding the Transaction that:**

- (a) Non-Reliance: It is acting for its own account, and it has made its own independent decisions to enter into the Transaction and as to whether the Transaction is appropriate or proper for it based upon its own judgment and upon advice from such advisers as it has deemed necessary. It is not relying on any communication (written or oral) of the other party as investment advice or as a recommendation to enter into the Transaction, it being understood that information and explanations related to the terms and conditions of the Transaction will not be considered investment advice or a recommendation to enter into the Transaction. No communication (written or oral) received from the other party will be deemed to be an assurance or guarantee as to the expected results of the Transaction.
- (b) Assessment and Understanding: It is capable of assessing the merits of and evaluating and understanding (on its own behalf or through independent professional advice), and understands and accepts, the terms, conditions and risks of the Transaction. It is also capable of assuming, and assumes, the financial and other risks of the Transaction.
- (c) Status of Parties: The other party is not acting as a fiduciary for or an adviser to it in respect of the Transaction.
- (d) Other Transactions: It understands and acknowledges that the other party may, either in connection with entering into the Transaction or from time to time thereafter, engage in open market transactions that are designed to hedge or reduce the risks incurred by it in connection with such Transaction and that the effect of such open market transactions may be to affect or reduce the value of such Transaction.



Please confirm that the foregoing correctly sets forth the terms and conditions of our agreement by responding within two (2) Business Days by returning via facsimile an executed copy of this Confirmation to the attention of Commodity Confirmations Unit (facsimile number 0044 1202320250; telephone number 0044 1202320226; email investor.products.documentation@jpmorgan.com). Failure to respond within such period shall not affect the validity or enforceability of this Transaction, and shall be deemed to be an affirmation of the terms and conditions contained herein, absent manifest error.

**J.P. Morgan Securities plc**

By:

A handwritten signature in black ink, appearing to read "R Beasley".

Name: Robert Beasley

Title: Vice President

BANK VONTOBEL AG

Accepted and confirmed as of the date first above written

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



**SCHEDULE 1: Valuation Dates**

The Effective Date
19-Jan-18
16-Feb-18
16-Mar-18
20-Apr-18
18-May-18
15-Jun-18
20-Jul-18
17-Aug-18
21-Sep-18
19-Oct-18
16-Nov-18
21-Dec-18
(being the <b>"Final Fixing Date"</b> )

Each of the Valuation Dates must be a Business Day. In the event that a Valuation Date falls on a day which is not a Business Day, then such Valuation Date will be the immediately following day which is a Business Day in accordance with the Business Day Convention.



**ANNEX A: INDEX RULES**

<b>1</b>	The J.P. Morgan Helix 2 Index (USD)
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# **The J.P. Morgan Helix 2 Index (USD)**

## **Index Rules**

**J.P.Morgan**

**7 June 2013 as last amended and restated on 26 September 2016**

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## CONTENTS

1.	Overview .....	4
2.	Constituents .....	5
3.	Index Composition, Rebalancing and Calculation .....	6
4.	Calculation of the Index.....	13
5.	Market Disruption Events .....	14
6.	Corrections.....	14
7.	Extraordinary Events .....	14
8.	Index Sponsor and Index Calculation Agent .....	15
9.	Amendments .....	16
10.	Synthetic Exposure.....	16
11.	No offer of securities .....	16
12.	General Definitions.....	17
13.	Mathematical Functions.....	19
14.	Versions of the Index Rules and Index Adjustments .....	20

**J.P.Morgan**

**7 June 2013 as last amended and restated on 26 September 2016**

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## Notices, Disclaimers and Conflicts

Capitalised terms used in this section but not otherwise defined have the meanings set out in other parts of the Index Rules.

Neither the Index Sponsor nor the Index Calculation Agent endorses or makes any representation or warranty, express or implied, in connection with any security, derivative, fund, certificate of deposit or other financial product (each a **"Product"**) that references the J.P. Morgan Helix 2 Index (USD) (the **"Index"**) or the Constituents (as defined below) including, but not limited to, the suitability or appropriateness of purchasing or entering into a Product or the performance of the Index or the performance of any Product linked to the Index or the Constituents. Furthermore, neither the Index Sponsor nor the Index Calculation Agent has any obligation or liability in connection with the administration, marketing or trading of any Product and is not obliged to enter into or promote Products.

The Index (and each Constituent) is the exclusive property of the Index Sponsor and no one may reproduce, distribute or disseminate this document or the information contained in this document (the **"Index Rules"**, subject to the applicable adjustment provisions) or an Index Level (or the index level of a Constituent, as applicable) without the prior written consent of the Index Sponsor. This document is not intended for distribution to, or use by any person in, a jurisdiction where such distribution is prohibited by law or regulation.

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## 1. Overview

The J.P. Morgan Helix 2 Index (USD) (the “**Index**”) is a rules-based index that aims to provide exposure to momentum in synthetic short-term interest rates across the Eurodollar and Euribor futures markets.

This document (the “**Index Rules**”) sets out the rules applicable to the Index and the basis on which the Index will be calculated. The Index Rules may be amended from time to time without notice but will be available from J.P. Morgan Securities plc of 25 Bank Street, Canary Wharf London E14 5JP (“**JPMS plc**” and, in its capacity as Index Sponsor, the “**Index Sponsor**”) upon request. JPMS plc also acts as the calculation agent with respect to the Index (the “**Index Calculation Agent**”). The current version of the Index Rules at any time can be obtained in accordance with Section 14.

The Index is a dynamic strategy that aims to provide exposure to momentum in short-term interest rates by replicating synthetic long or short positions in the eight (8) underlying rules-based futures tracker indices (the “**Constituents**”), specified in table A below, subject to the occurrence of a Stop Loss event as described further below.

JPMS plc also acts as the index sponsor and index calculation agent for each of the Constituents underlying the Index. Each of the Constituents is governed according to index rules which set out the methodology applicable to each such Constituent and the basis on which such Constituent will be calculated. The index rules applicable to each Constituent may be amended from time to time without notice and will be available from JPMS plc upon request in accordance with Section 14.

In respect of each Calculation Day (as defined in Section 12), the Index Calculation Agent will determine, in accordance with the methodology described herein, whether the Index will provide synthetic long or short exposure to each of the Constituents, based on the “price momentum” of each such Constituent, calculated in accordance with Section 3 hereof. The price momentum with respect to each Constituent is determined by using a simple moving average of daily returns in periods when such Constituent experiences low realised volatility and by using an exponentially weighted moving average of daily returns in periods during which the Constituent experiences higher realised volatility (above a certain threshold, as described in Section 3). The Index may switch between synthetic long and short exposure with respect to any Constituent in respect of any Calculation Day that is a Scheduled Constituent Trading Day and not a Disrupted Day for such Constituent, subject to a five (5) Calculation Day minimum holding period (during which time exposure must remain unchanged with respect to such Constituent). The Index also embeds a mechanic, which is referred in these Rules as “Stop Loss Indicator” which, depending on the recent performance of the Constituents, the Index can switch the existing synthetic long or short exposure within that Constituents into synthetic neutral exposure for that Constituents for a specified period of time, in accordance with the terms set out in Section 3.5. (Stop Loss Indicator Calculation) below.

The Index is rebalanced on a monthly basis aiming to target an annualized volatility of 3.5% in connection with each rebalancing. Accordingly, in calculating the level of the Index (the “**Index Level**”), the Index will be scaled by the applicable volatility-targeted leverage, which will be based on the performance of each Constituent during the period specified in Section 3. The basket of Constituents constructed using the methodology summarized above (before application of the volatility-targeted leverage) is referred to as the “**Basket Index**”. The volatility-targeted leverage to be applied to the Basket Index is adjusted as of each Rebalancing Day (as defined in Section 3.7), subject to certain constraints with respect to each Constituent as described herein. These constraints include a minimum volatility-targeted leverage factor of 0% and a maximum leverage factor of 700%. Once applied on a Rebalancing Day, the volatility-targeted leverage applied to the Index remains unchanged until the following monthly Rebalancing Day.

As of 16 April 2013 (the “**Live Date**”), the Bloomberg ticker for the Index is JHLXH2US <index>. The Index Calculation Agent will determine the Index Level for each Calculation Day subject to and in accordance with these Index Rules. The Index Level will never be less than zero (0).

Capitalized terms not otherwise defined in these Index Rules have the meanings set out in Section 12.

## 2. Constituents

### 2.1 The Calculation of the level of a Constituent

With respect to any Constituent<sub>c</sub> and any Calculation Day<sub>t</sub> that is a Scheduled Constituent<sub>c</sub> Trading Day and is not a Disrupted Day, for such Constituent<sub>c</sub>, the level of that Constituent (the “**Constituent Level**”) for such Calculation Day will be equal to the level published with respect to such Constituent for such day on the Bloomberg page (or any successor page) set forth in Table A in Section 2.2 herein.

With respect to any Constituent<sub>c</sub> and any Calculation Day<sub>t</sub> that is not a Scheduled Constituent<sub>c</sub> Trading Day or is a Disrupted Day, for such Constituent<sub>c</sub>, the Constituent Level of that Constituent for such Calculation Day will be equal to the Constituent Level for the Constituent on the immediately preceding Scheduled Constituent<sub>c</sub> Trading Day that is not a Disrupted Day for such Constituent<sub>c</sub> (i.e., **Constituent<sub>t</sub><sup>c</sup> = Constituent<sub>t-1</sub><sup>c</sup>**).

where:

“**Scheduled Constituent<sub>c</sub> Trading Day**” means, with respect to Constituents 1, 2, 3 and 4 as set forth in Table A in Section 2.2 herein (i.e., c=1,2,3 and 4), Scheduled Constituent Trading Day A (as defined in Section 12), and, with respect to Constituents 5, 6, 7 and 8 as set forth in Table A in Section 2.2 herein (i.e., for c=5,6,7 and 8), Scheduled Constituent Trading Day B (as defined in Section 12).

### 2.2 The Constituents

The Index aims to tracks the synthetic long and/or short performance, subject to the provisions set out in Section 3.5 below, of the Constituents as set forth in Table A below.

Table A

<b>c</b> <b>(constituent number)</b>	<b>Constituents</b>	<b>Bloomberg Page</b>
1	J.P. Morgan Front Eurodollar Futures Tracker Index (USD)	JFLFUS1U <index>
2	J.P. Morgan Second Near Eurodollar Futures Tracker Index (USD)	JFLFUS2U <index>
3	J.P. Morgan Third Near Eurodollar Futures Tracker Index (USD)	JFLFUS3U <index>
4	J.P. Morgan Fourth Near Eurodollar Futures Tracker Index (USD)	JFLFUS4U <index>
5	J.P. Morgan Front Euribor Futures Tracker Index (USD)	JFLFEU1U <index>
6	J.P. Morgan Second Near Euribor Futures Tracker Index (USD)	JFLFEU2U <index>
7	J.P. Morgan Third Near Euribor Futures Tracker Index (USD)	JFLFEU3U <index>
8	J.P. Morgan Fourth Near Euribor Futures Tracker Index (USD)	JFLFEU4U <index>

The tracker index rules for the Constituents listed in Table A above describe the methodology for calculating the Constituent Levels of each such Constituent and may be amended from time to time without notice. The rules applicable to each Constituent will be available from JPMS plc upon request in accordance with Section 14 hereof and are also available via the following hyperlinks:

[http://www.jpmorgan.com/directdoc/Eurodollar\\_1.pdf](http://www.jpmorgan.com/directdoc/Eurodollar_1.pdf)

[http://www.jpmorgan.com/directdoc/Eurodollar\\_2.pdf](http://www.jpmorgan.com/directdoc/Eurodollar_2.pdf)

[http://www.jpmorgan.com/directdoc/Eurodollar\\_3.pdf](http://www.jpmorgan.com/directdoc/Eurodollar_3.pdf)

[http://www.jpmorgan.com/directdoc/Eurodollar\\_4.pdf](http://www.jpmorgan.com/directdoc/Eurodollar_4.pdf)

[http://www.jpmorgan.com/directdoc/Euribor\\_1.pdf](http://www.jpmorgan.com/directdoc/Euribor_1.pdf)

[http://www.jpmorgan.com/directdoc/Euribor\\_2.pdf](http://www.jpmorgan.com/directdoc/Euribor_2.pdf)

[http://www.jpmorgan.com/directdoc/Euribor\\_3.pdf](http://www.jpmorgan.com/directdoc/Euribor_3.pdf)

[http://www.jpmorgan.com/directdoc/Euribor\\_4.pdf](http://www.jpmorgan.com/directdoc/Euribor_4.pdf)

### 3. Index Composition, Rebalancing and Calculation

In respect of any Constituent<sub>c</sub> and any Calculation Day<sub>t</sub>, the Index Calculation Agent will determine if:

- (a) a long or short position is indicated with respect to such Constituent (and whether such position should be switched, subject to the Holding Period described in Section 3.4);
- (b) the Simple Moving Average or the Weighted Moving Average applies to such Constituent (as described in Section 3.1 and Section 3.2, respectively); and
- (c) the Stop-Loss Indicator is triggered with respect to such Constituent (as described in Section 3.5).

In addition, in respect of each Rebalancing Day<sub>t</sub> that is a Scheduled Index Trading Day and is not a Disrupted Day with respect to any Constituent, the Index Calculation Agent will determine the, in accordance with the methodology set out in these Index Rules the applicable Index Leverage, subject to the *IndexMinLeverage* and *IndexMaxLeverage* (each as described in Section 3.8). The Index Calculation Agent will determine the Index Level for each Calculation Day<sub>t</sub> based on these factors, as further described in Section 4.

#### 3.1 Simple Moving Average Calculations

With respect to a Constituent<sub>c</sub> in respect of each Calculation Day<sub>t</sub>, the Index Calculation Agent will determine the simple moving average of daily returns for such Constituent (the "**Simple Moving Average**" or " $SMA_t^c$ ").

The Simple Moving Average " $SMA_t^c$ " is equal to the average of the sixty-five (65) daily returns determined from the sixty-six (66) Constituent Levels that are observed from and including the sixty-fifth (65<sup>th</sup>) Calculation Day immediately preceding such Calculation Day<sub>t</sub> to, and including, such Calculation Day<sub>t</sub> (such period, the "**SMA Observation Period**") in accordance with the following formula:

$$SMA_t^c = \frac{1}{sm} \times \sum_{j=1}^{sm} \left( \frac{Constituent\ Level_{j+1}^c}{Constituent\ Level_j^c} - 1 \right)$$

where:

" $Constituent\ Level_{j+1}^c$ " means, with respect to a Constituent<sub>c</sub>, the Constituent Level in respect of the j+1-th Calculation Day of the SMA Observation Period;

" $Constituent\ Level_j^c$ " means, with respect to a Constituent<sub>c</sub>, the Constituent Level in respect of the j-th Calculation Day of the SMA Observation Period; and

"sm" is equal to 65.

With respect to a Constituent<sub>c</sub> in respect of each Calculation Day<sub>t</sub>, the Index Calculation Agent will determine the long/short indicator that is applicable to such Constituent (the "**SMA Indicator**" or " $Indicator_t^c(SMA_t^c)$ ") in respect of such day. If the Simple Moving Average with respect to a Constituent<sub>c</sub> in respect of a Calculation Day<sub>t</sub> is:

- a) greater than zero (0), the SMA Indicator for such Constituent will equal four (4) for such day; and
- b) equal to or less than zero (0) the SMA Indicator for such Constituent will equal negative four (-4) for such day in accordance with the following:

if  $SMA_t^c > 0$ ,  $Indicator_t^c(SMA_t^c) = 4$ ; and

otherwise, if  $SMA_t^c \leq 0$ ,  $Indicator_t^c(SMA_t^c) = -4$ .

With respect to a particular Constituent<sub>c</sub> in respect of any Calculation Day<sub>t</sub> that is not a Scheduled Constituent<sub>c</sub> Trading Day, the SMA Indicator with respect to such Constituent on such Calculation Day<sub>t</sub> will be deemed to be equal to the SMA Indicator for such Constituent in respect of the immediately preceding Calculation Day that is a Scheduled Constituent<sub>c</sub> Trading Day for such Constituent<sub>c</sub>.

#### 3.2 Weighted Moving Average Calculations

With respect to a Constituent<sub>c</sub> in respect of each Calculation Day<sub>t</sub>, the Index Calculation Agent will determine the weighted moving average of daily returns for such Constituent (the "**Weighted Moving Average**" or " $WMA_t^c$ ").

The Weighted Moving Average " $WMA_t^c$ " is equal to the weighted average of the "*i*" daily returns determined from the "*i* + 1" Constituent Levels that are observed during the period from and including the "*i*<sup>th</sup>" Calculation Day immediately preceding such Calculation Day<sub>t</sub> (such *i*<sup>th</sup> immediately preceding Calculation Day, the "**WMA Start Date<sub>t</sub>**") to and including such Calculation Day<sub>t</sub> (such period, the "**WMA Observation Period**", and each Calculation Day during such period, a "**Calculation Day<sub>j</sub>**", where Calculation Day<sub>j=1</sub> is the WMA Start Date<sub>t</sub> and Calculation Date<sub>j=i+1</sub> is Calculation Day<sub>t</sub>), in accordance with the following formula:

$$WMA_t^c = \frac{1}{divisor_t^c} \times \sum_{j=1}^i \left( \left( \frac{Constituent\ Level_{j+1}^c}{Constituent\ Level_j^c} - 1 \right) \times (1 - \lambda^c)^{\omega-j} \right)$$

where:

"*Constituent Level<sub>j+1</sub><sup>c</sup>*" means, with respect to a Constituent<sub>c</sub>, the Constituent Level in respect of the j+1-th Calculation Day of the WMA Observation Period;

"*Constituent Level<sub>j</sub><sup>c</sup>*" means, with respect to a Constituent<sub>c</sub>, the Constituent Level in respect of the j-th Calculation Day of the WMA Observation Period;

"*divisor<sub>t</sub><sup>c</sup>*" =  $\sum_{k=1}^i (1 - \lambda^c)^{\omega-k}$ ;

"*i*" = MIN( $\omega$ ,  $dc$ );

" $\omega$ " =  $\frac{\text{LOG}(1-\varphi)}{\text{LOG}(1-\lambda^c)}$ , rounded to the nearest integer; provided however that if the decimal portion of " $\omega$ " is equal exactly to 0.50, the Index Calculation Agent will round " $\omega$ " to nearest even integer (where "0" and integers ending in "0" are considered even);

" $\varphi$ " = 85%;

" $\lambda^c$ " = 0.004 with respect to Constituents 1, 2, 3 and 4 as set forth in Table A in Section 2.2 herein (*i.e.*,  $c=1,2,3$  and 4);

" $\lambda^c$ " = 0.0025 with respect to Constituents 5,6,7 and 8 as set forth in Table A in Section 2.2 herein (*i.e.*,  $c=5,6,7$  and 8); and

" $dc$ " means the number of Calculation Days in the period from and including 12 January 1999 to and including Calculation Day<sub>t</sub> (for example,  $dc$  is equal to 1 on 12 January 1999, 2 on 13 January 1999, *etc.*)

With respect to a Constituent<sub>c</sub> in respect of each Calculation Day<sub>t</sub>, the Index Calculation Agent will determine the long/short indicator that is applicable to such Constituent (the "**WMA Indicator**" or "*Indicator<sub>t</sub><sup>c</sup>(WMA<sub>t</sub><sup>c</sup>)*") in respect of such day. If the Weighted Moving Average with respect to a Constituent<sub>c</sub> in respect of a Calculation Day<sub>t</sub> is:

- a) greater than zero (0), the WMA Indicator for Constituent<sub>c</sub> will equal four (4) for such day;
- b) equal to or less than zero (0), the WMA Indicator for such Constituent will equal negative four (-4) for such day in accordance with the following:

if  $WMA_t^c > 0$ ,  $Indicator_t^c(WMA_t^c) = 4$ ; and  
otherwise, if  $WMA_t^c \leq 0$ ,  $Indicator_t^c(WMA_t^c) = -4$ .

With respect to a particular Constituent<sub>c</sub> in respect of any Calculation Day<sub>t</sub> that is not a Scheduled Constituent<sub>c</sub> Trading Day, the WMA Indicator with respect to such Constituent in respect of such Calculation Day<sub>t</sub> will be deemed to be equal to the WMA Indicator for such Constituent in respect of the immediately preceding Calculation Day that is a Scheduled Constituent<sub>c</sub> Trading Day for such Constituent<sub>c</sub>.

### 3.3 Moving Average Indicator Calculation

With respect to a Constituent<sub>c</sub> in respect of each Calculation Day<sub>t</sub>, the Index Calculation Agent will determine the moving average indicator (the "**Moving Average Indicator**" or "*Indicator<sub>t</sub><sup>c</sup>(MA<sub>t</sub><sup>c</sup>)*") to apply to such Constituent as either the Simple Moving Average or the Weighted Moving Average for such Constituent.

If the Volatility Measure<sub>MA</sub> (as defined below) with respect to such Constituent exceeds the threshold,  $\tau^c$ , applicable to such Constituent in respect of a particular Calculation Day<sub>t</sub>, the applicable Moving Average Indicator for such Constituent in respect of such Calculation Day will be deemed to be the WMA Indicator (determined in accordance with Section 3.2).

If the *VolMeasure<sub>MA,t</sub><sup>c</sup>* with respect to such Constituent<sub>c</sub> does not exceed the threshold,  $\tau^c$ , applicable to such Constituent in respect of a particular Calculation Day<sub>t</sub>, the applicable Moving Average Indicator for such Constituent in respect of such Calculation Day will be deemed to be the SMA Indicator (determined in accordance with Section 3.1), in accordance with the following:

If, for a particular Constituent<sub>c</sub>:

$VolMeasure_{MA,t}^c > \tau^c$ , then  $Indicator_t^c(MA_t^c) = Indicator_{t-2}^c(WMA_{t-2}^c)$  for such Constituent; and

$VolMeasure_{MA,t}^c \leq \tau^c$ , then  $Indicator_t^c(MA_t^c) = Indicator_{t-2}^c(SMA_{t-2}^c)$  for such Constituent,

where:

$\tau^c = 0.25\%$  with respect to Constituents 1, 2, 3 and 4 as set forth in Table A in Section 2.2 herein (i.e.,  $c=1,2,3$  and 4);

$\tau^c = 0.50\%$  with respect to Constituents 5,6,7 and 8 as set forth in Table A in Section 2.2 herein (i.e.,  $c=5,6,7$  and 8);

" $Indicator_{t-2}^c(SMA_{t-2}^c)$ " means the SMA Indicator in respect of the second (2<sup>nd</sup>) Calculation Day immediately preceding such Calculation Day<sub>t</sub>;

" $Indicator_{t-2}^c(WMA_{t-2}^c)$ " means the WMA Indicator in respect of the second (2<sup>nd</sup>) Calculation Day immediately preceding such Calculation Day<sub>t</sub>;

" $VolMeasure_{MA,t}^c$ " or the "**Volatility Measure<sub>MA</sub>**" means, with respect to any Calculation Day<sub>t</sub> and any Constituent<sub>c</sub>, the square root of 252 multiplied by the standard deviation of the 22 daily returns of such Constituent determined from the Constituent Levels that are observed during the period from and including the twenty-seventh (27<sup>th</sup>) Calculation Day immediately preceding such Calculation Day<sub>t</sub> to and including the fifth (5<sup>th</sup>) Calculation Day immediately preceding such Calculation Day<sub>t</sub> (such period, the "**Volatility Observation Period<sub>MA</sub>**"), as determined in accordance with the following formula:

$$VolMeasure_{MA,t}^c = \sqrt{\frac{252}{m_3 - 1} \times \sum_{j=1}^{m_3} \left( ConstRtn(j, 3) - \frac{1}{m_3} \sum_{k=1}^{m_3} ConstRtn(k, 3) \right)^2}$$

where:

" $m_3$ " is equal to 22;

" $ConstRtn(j, 3)$ " means, with respect to a Constituent<sub>c</sub>, the return of such Constituent in respect of the  $j$ -th Calculation Day of Volatility Observation Period<sub>MA</sub>, calculated as follows:

$$ConstRtn(j, 3) = \frac{Constituent Level(j+1,3)}{Constituent Level(j,3)} - 1;$$

" $ConstRtn(k, 3)$ " means, with respect to a Constituent<sub>c</sub>, the return of such Constituent in respect of the  $k$ -th Calculation Day of Volatility Observation Period<sub>MA</sub>, calculated as follows:

$$ConstRtn(k, 3) = \frac{Constituent Level(k+1,3)}{Constituent Level(k,3)} - 1;$$

" $Constituent Level(j + 1, 3)$ " means the Constituent Level for Constituent<sub>c</sub> in respect of the  $j+1$ -th Calculation Day of Volatility Observation Period<sub>MA</sub>;

" $Constituent Level(j, 3)$ " means the Constituent Level for Constituent<sub>c</sub> in respect of the  $j$ -th Calculation Day of Volatility Observation Period<sub>MA</sub>;

" $Constituent Level(k + 1, 3)$ " means the Constituent Level for of the Constituent<sub>c</sub> in respect of the  $k+1$ -th Calculation Day of Volatility Observation Period<sub>MA</sub>; and

" $Constituent Level(k, 3)$ " means the Constituent Level for Constituent<sub>c</sub> in respect of the  $k$ -th Calculation Day of Volatility Observation Period<sub>MA</sub>.

Furthermore, the determination of which Moving Average Indicator will apply with respect to a particular Constituent<sub>c</sub> on a particular Calculation Day<sub>t</sub> will be subject to the Holding Period as described in Section 3.4.

### 3.4 Holding Period

"**Holding Period**" means, with respect to any Constituent<sub>c</sub>, the minimum number of Calculation Days on which the Moving Average Indicator must remain the same before it may change. If, in respect of any Calculation Day<sub>t</sub>, the Moving Average Indicator applicable to a Constituent<sub>c</sub> is not equal to the Moving Average Indicator applicable to such Constituent on the immediately preceding Calculation Day (i.e.,  $Indicator_t^c(MA_t^c) \neq Indicator_{t-1}^c(MA_{t-1}^c)$ ), the Moving Average Indicator will remain unchanged for the four (4) consecutive Calculation Days immediately following Calculation Day<sub>t</sub> (i.e.,  $Indicator_t^c(MA_t^c) = Indicator_{t+1}^c(MA_{t+1}^c) = \dots = Indicator_{t+4}^c(MA_{t+4}^c)$ ).

In addition to being subject to the Holding Period described above in respect of each Calculation Day<sub>t</sub> that is not a Disrupted Day, the Moving Average Indicator for a particular Constituent<sub>c</sub> in respect of Calculation Day<sub>t</sub> may only change to a value that differs from its value on the Calculation Day immediately preceding such a Calculation Day<sub>t</sub> when



the Calculation Day immediately preceding such a Calculation Day<sub>t</sub> is also a Scheduled Constituent<sub>c</sub> Trading Day that is not a Disrupted Day for such Constituent.

### 3.5 Stop-Loss Indicator Calculation

With respect to a Constituent<sub>c</sub> in respect of each Calculation Day<sub>t</sub>, the Index Calculation Agent will determine whether a stop-loss (the “**Stop Loss**”) is triggered with respect to such Constituent.

If the stop-loss return (the “**SL Return**” or “ $r(sl)_t^c$ ”, as defined below) is less than the stop-loss threshold (the “**SL Threshold**”, as defined below) the stop-loss indicator (the “**Stop-Loss Indicator**” or “ $Indicator_t^c(SL_t^c)$ ”) will be equal to zero (0) with respect to such Constituent for twenty-two (22) Calculation Days from and including such Calculation Day:

$$\begin{aligned} &\text{if } r(sl)_t^c < SL \text{ Threshold,} & Indicator_t^c(SL_t^c) &= 0; \text{ and} \\ &\text{otherwise, if } r(sl)_t^c \geq SL \text{ Threshold,} & Indicator_t^c(SL_t^c) &= 1, \end{aligned}$$

where:

“SL Threshold” is equal to -3.50%.

“ $r(sl)_t^c$ ” or the “SL Return” means, with respect to any Constituent<sub>c</sub> in respect of any Calculation Day<sub>t</sub>, the return to determine whether a stop-loss is triggered with respect to such Constituent, calculated in accordance with the following formula:

$$r(sl)_t^c = \left( \frac{Component_{t-2}^c}{Component_{t-7}^c} - 1 \right)$$

where:

“ $Component_{t-2}^c$ ” means the Component (which has the meaning ascribed thereto in Section 3.7) in respect of the second (2<sup>nd</sup>) Calculation Day preceding such a Calculation Day<sub>t</sub>; and

“ $Component_{t-7}^c$ ” means the Component (which has the meaning ascribed thereto in Section 3.7) in respect of the seventh (7<sup>th</sup>) Calculation Day preceding such a Calculation Day<sub>t</sub>.

The Stop Loss Indicator for a particular Constituent<sub>c</sub> in respect of Calculation Day<sub>t</sub> may only change to a value that differs from its value in respect of Calculation Day<sub>t-1</sub> when Calculation Day<sub>t-1</sub> is also a Scheduled Constituent<sub>c</sub> Trading Day that is not a Disrupted Day for such Constituent.

### 3.6 Indicator Calculation

With respect to a Constituent<sub>c</sub> for any Calculation Day<sub>t</sub>, the overall indicator (the “**Indicator**” or “ $Indicator_t^c$ ”) applicable to such a Constituent will be determined in accordance with the following formula:

$$Indicator_t^c = Indicator_t^c(SL_t^c) \times Indicator_t^c(MA_t^c)$$

where:

“ $Indicator_t^c(SL_t^c)$ ” is the Stop-Loss Indicator in respect of Calculation Day<sub>t</sub>, which has the meaning ascribed thereto in Section 3.5; and

“ $Indicator_t^c(MA_t^c)$ ” is the Moving Average Indicator in respect of Calculation Day<sub>t</sub>, which has the meaning ascribed thereto in Section 3.3.

### 3.7 Basket Index Calculation

For any Calculation Day<sub>t</sub>, the Index Calculation Agent will determine the non-volatility targeted return (“ $BskRtn_t$ ”, as defined below) of the equally-weighted basket of Constituents (the “**Basket Index**” or “ $BasketIndex_t$ ”) in accordance with the following formula:

$$BskRtn_t = \frac{BasketIndex_t}{BasketIndex_{t-1}} - 1$$

where:

$$BasketIndex_t = BasketIndex_{RD(t)} + BasketExp_t \times \sum_{c=1}^8 \left( \frac{1}{8} \times \left( \frac{Component_t^c}{Component_{RD(t)}^c} - 1 \right) \right)$$

where:

“ $BasketIndex_{t-1}$ ” means the value of the Basket Index in respect of the Calculation Day immediately preceding such a Calculation Day;

“ $RD(t)$ ” is the Rebalancing Day immediately preceding Calculation Day;

“*Rebalancing Day*” means the first (1st) Scheduled Index Trading Day of each calendar month, irrespective of whether such day is a Disrupted Day for any of the Constituents;

“ $BasketIndex_{RD(t)}$ ” is the level of the Basket Index in respect of the Rebalancing Day immediately preceding Calculation Day;

“ $BasketExp_t$ ” means the Basket Exposure is determined such that if the Calculation Day immediately preceding Calculation Day is:

- a) a Rebalancing Day, then the  $BasketExp_t$  is equal to the level of the Basket Index in respect of the sixth (6<sup>th</sup>) Calculation Day immediately preceding such Calculation Day (i.e.,  $BasketExp_t = BasketIndex_{t-6}$ ); and
- b) not a Rebalancing Day,  $BasketExp_t$  is equal to the level of the Basket Exposure in respect of the Calculation Day immediately preceding such Calculation Day (i.e.,  $BasketExp_t = BasketExp_{t-1}$ );

“ $Component_t^c$ ” for a Constituent<sub>c</sub> means the Component for a Calculation Day, which is set equal to 100 as of the 1 June 1999, and is determined in respect of each subsequent Calculation Day from and including such 1 June 1999 to and including such Calculation Day in accordance with the following formula:

$$Component_t^c = Component_{t-1}^c \times \left( 1 + Indicator_t^c \times \left( \frac{Constituent Level_t^c}{Constituent Level_{t-1}^c} - 1 \right) \right)$$

where:

“ $Component_{t-1}^c$ ” means the Component respect of Calculation Day immediately preceding Calculation Day;

“ $Indicator_t^c$ ” has the meaning set out in Section 3.6 in respect of Calculation Day;

“*Constituent<sub>t</sub> Level*” means the Constituent Level of Constituent<sub>c</sub> in respect of Calculation Day, determined in accordance with Section 2; and

“ $Constituent Level_{t-1}^c$ ” means the Constituent Level of Constituent<sub>c</sub> in respect of Calculation Day<sub>t-1</sub> determined in accordance with Section 2.

If, in respect of any Calculation Day,  $BasketIndex_t$  results in a level that is less than or equal to zero (0), the level of  $BasketIndex_t$  for that Calculation Day and each subsequent Calculation Day shall be deemed to be zero (0).

### 3.8 Index Leverage

In respect of each Rebalancing Day, the Index Calculation Agent will determine the Index Leverage (as defined below) based on the greater of the one (1) month and three (3) month realised volatilities of the Basket Index as described below. This Index Leverage will apply to the Index Level calculation in respect of each Calculation Day from but excluding such Rebalancing Day to and including the immediately following Rebalancing Day.

where:

“**Rebalancing Day**” shall have the meaning set forth in Section 3.7; and

The “**Index Leverage**” will be calculated by the Index Calculation Agent in respect of each Rebalancing Day in accordance with the following:

$$IndexLeverage_{RD,t} = \text{Max} \left( \text{Min} \left( \frac{IndexTargetVol}{IndexVol_{RD,t}}, IndexMaxLeverage \right), IndexMinLeverage \right)$$

where:



"*IndexLeverage<sub>RD,t</sub>*" means with respect to any Calculation Day<sub>t</sub> that is a Rebalancing Day, the Index Leverage in respect of such a day;

"*IndexTargetVol*" means 3.50%, the annualized target volatility of the Index;

"*IndexMinLeverage*" means 0%, the minimum leverage that may be applied to the Index;

"*IndexMaxLeverage*" means 700%, the maximum leverage that may be applied to the Index;

"*IndexVol<sub>RD,t</sub>*" means, with respect to any Calculation Day<sub>t</sub> that is a Rebalancing Day, the greater of the recent realised annualized volatilities of the Basket Index over two (2) volatility targeting periods, Volatility Observation Period 1 and Volatility Observation Period 2 as described below, calculated in accordance with the following formula:

$$IndexVol_{RD,t} = \text{Max}(IndexVolMeasure_{1,t-6}, IndexVolMeasure_{2,t-6})$$

where:

"*IndexVolMeasure<sub>1,t</sub>*" means, with respect to any Calculation Day<sub>t</sub>, the square root of 252 multiplied by the standard deviation of the twenty-two (22) daily returns of the *BasketIndex<sub>t</sub>* index levels that are observed from and including the twenty-second (22<sup>nd</sup>) Calculation Day immediately preceding such Calculation Day to and including such Calculation Day (such period, "**Volatility Observation Period 1**"), as determined in accordance with the following formula:

$$IndexVolMeasure_{1,t} = \sqrt{\frac{252}{m_1 - 1} \times \sum_{j=1}^{m_1} \left( Rtn(j, 1) - \frac{1}{m_1} \times \sum_{k=1}^{m_1} Rtn(k, 1) \right)^2}$$

"*IndexVolMeasure<sub>2,t</sub>*" means, with respect to any Calculation Day<sub>t</sub>, the square root of 252 multiplied by the standard deviation of the sixty-six (66) daily returns of the *BasketIndex<sub>t</sub>* index levels that are observed from and including the sixty sixth (66<sup>th</sup>) Calculation Day immediately preceding such Calculation Day to and including such Calculation Day (such period, "**Volatility Observation Period 2**"), as determined in accordance with the following formula:

$$IndexVolMeasure_{2,t} = \sqrt{\frac{252}{m_2 - 1} \times \sum_{j=1}^{m_2} \left( Rtn(j, 2) - \frac{1}{m_2} \times \sum_{k=1}^{m_2} Rtn(k, 2) \right)^2}$$

where:

"*m<sub>1</sub>*" is equal to 22;

"*m<sub>2</sub>*" is equal to 66;

"*Rtn(j, 1)*" means the return of the Basket Index in respect of the *j+1*-th day of Volatility Observation Period 1 determined in accordance with the following formula:

$$Rtn(j, 1) = \frac{BasketIndex(j+1,1)}{BasketIndex(j,1)} - 1; \text{ and}$$

"*Rtn(j, 2)*" means the return of the Basket Index in respect of the *j+1*-th day of Volatility Observation Period 2 determined in accordance with the following formula:

$$Rtn(j, 2) = \frac{BasketIndex(j+1,2)}{BasketIndex(j,2)} - 1;$$

"*Rtn(k, 1)*" means the return of the Basket Index in respect of the *k+1*-th day of Volatility Observation Period 1 determined in accordance with the following formula:

$$Rtn(k, 1) = \frac{BasketIndex(k+1,1)}{BasketIndex(k,1)} - 1;$$

"*Rtn(k, 2)*" means the return of the Basket Index in respect of the *k+1*-th day of Volatility Observation Period 2 determined in accordance with the following formula:

$$Rtn(k, 2) = \frac{BasketIndex(k+1,2)}{BasketIndex(k,2)} - 1;$$

"*BasketIndex(j + 1,1)*" means the level of the Basket Index in respect of the *j+1*-th day of Volatility Observation Period 1;

*"BasketIndex(j + 1,2)"* means the level of the Basket Index in respect of the  $j+1$ -th day of Volatility Observation Period 2;

*"BasketIndex(j, 1)"* means the level of the Basket Index in respect of the  $j$ -th day of Volatility Observation Period 1;

*"BasketIndex(j, 2)"* means the level of the Basket Index in respect of the  $j$ -th day of Volatility Observation Period 2;

*"BasketIndex(k + 1,1)"* means the level of the Basket Index in respect of the  $k+1$ -th day of Volatility Observation Period 1;

*"BasketIndex(k + 1,2)"* means the level of the Basket Index in respect of the  $k+1$ -th day of Volatility Observation Period 2;

*"BasketIndex(k, 1)"* means the level of the Basket Index in respect of the  $k$ -th day of Volatility Observation Period 1; and

*"BasketIndex(k, 2)"* means the level of the Basket Index in respect the  $k$ -th day of Volatility Observation Period 2.

#### 4. Calculation of the Index

##### 4.1 Index Base Date and Index Base Level

The Index Level was 100 on 1 October 1999 (the "**Index Base Date**"). The Index Calculation Agent started calculating the Index on a live basis on the Live Date (as specified in Section 1).

##### 4.2 Calculation of the Index Level

In respect of each Calculation Day<sub>t</sub>, the Index Calculation Agent will determine the Index Level ("**Index Level**" or "*Index<sub>t</sub>*") in accordance with the following formula:

$$Index_t = Index_{t-1} \times (1 + IndexLeverage_{RD(t)} \times BskRtn_t)$$

where:

"*BskRtn<sub>t</sub>*" has the meaning set forth in Section 3.7;

"RD(t)" has the meaning set forth in Section 3.7; and

"*IndexLeverage<sub>RD(t)</sub>*" means the Index Leverage, as set forth in Section 3.8, determined with respect to the Rebalancing Day immediately preceding Calculation Day<sub>t</sub>.

If, in respect of any Calculation Day<sub>t</sub>, *Index<sub>t</sub>* results in a level that is less than or equal to zero (0), *Index<sub>t</sub>* for that Calculation Day and each subsequent Calculation Day shall be deemed to be zero (0).

##### 4.3 Publication of the Index Level

The Index Calculation Agent will publish the Index Level of the Index in respect of each Calculation Day that is not a Disrupted Day as soon as reasonably practicable on or after such day. The Index Calculation Agent will not publish the Index Level in respect of any Calculation Day that is a Disrupted Day. The Index Level or any subsequent correction to an Index Level will be published on the Bloomberg page (or any successor) for the Index (as specified in Section 2.2) or on such other information source as the Index Calculation Agent may determine in its reasonable discretion.

The Index Sponsor or Index Calculation Agent may, at any time and without notice, change the frequency of publication of the Index Level or the place of publication of the Index Level.

Neither the Index Sponsor nor the Index Calculation Agent will be liable to any person for publishing or omitting to publish the Index Level at any particular time or in accordance with any particular method.

##### 4.4 No obligation to publish

The Index Calculation Agent is under no obligation, including but not limited to, as set out in Section 4.3, to continue the calculation, publication and dissemination of the Index Level.

##### 4.5 Rounding

The Index Calculation Agent will publish an Index Level rounded to three decimal places and may vary its rounding convention in its sole discretion provided that it will not publish an Index Level rounded to fewer than two (2) decimal places. Notwithstanding anything to the contrary herein, the Index Calculation Agent may calculate and maintain the Index Level, and may calculate an Index Level or other levels to more than two (2) decimal places, in connection with the determination of future Index Levels or in performing other calculations.

## 5. **Market Disruption Events**

If any Calculation Day is a Disrupted Day for one or more Constituents, the publication of the Index Level will be suspended until the next Calculation Day that is not a Disrupted Day.

## 6. **Corrections**

If:

- a) the level of a Constituent, price, rate, variable, input or other value which is used for any calculation relevant to the Index Level for any Calculation Day is subsequently corrected; or
- b) the Index Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of the Index Level of the Index for any Calculation Day,

then, the Index Calculation Agent may, if practicable and if it considers such correction material, correct the Index Level for any relevant Calculation Day. The Index Calculation Agent shall publish such corrected Index Level(s) as soon as reasonably practicable in the manner set forth in Section 4.3.

## 7. **Extraordinary Events**

### 7.1 **Successor Constituents**

If any Constituent is:

- a) no longer calculated by the applicable index sponsor but is quoted by a successor index sponsor acceptable to the Index Calculation Agent; or
- b) replaced by a successor Constituent that is, in the determination of the Index Calculation Agent, the same or substantially similar to the Constituent (such Constituent, the “**Successor Constituent**”),

then the Constituent as quoted by the successor index sponsor, or the Successor Constituent, as applicable, shall replace the Constituent with effect from a date determined by the Index Calculation Agent who may make such adjustment to these Index Rules, as it determines in good faith is appropriate, to account for such change.

### 7.2 **Change-in-Law or Manifest Error**

Without prejudice to the ability of the Index Calculation Agent to amend the Index Rules, the Index Calculation Agent may, acting in good faith and in a commercially reasonable manner substitute a Constituent following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intended methodology of the Index, including (without prejudice to the generality of the foregoing) any perception among market participants generally that the published level of the Constituent (or the published prices or levels of the contracts referenced by the Constituent) is inaccurate (and the relevant index sponsor fails to correct such level), and if the Index Calculation Agent so substitutes a Constituent, then the Index Calculation Agent may adjust the Index Rules as it determines in good faith to be appropriate to account for such substitution on such date(s) selected by the Index Calculation Agent.

### 7.3 **Material Change or Cancellation**

If, at any time, the index sponsor with respect to any Constituent (or Successor Constituent):

- a) announces that it will make a material change in the formula or the method of calculating the level of a Constituent (or Successor Constituent) or in any other way materially modifies that Constituent (or Successor Constituent, other than by a modification prescribed in the index rules of such Constituent or Successor Constituent); or
- b) permanently cancels any Constituent (or Successor Constituent) and no successor exists,

then the Index Calculation Agent shall remove such affected Constituent(s) (or Successor Constituent(s)) from the Index and/or may adjust the Index Rules as it determines in good faith to be appropriate to account for such change(s) on such date(s) as selected by the Index Calculation Agent (including, but not limited to, in the case where the Index

Calculation Agent is also the Index Sponsor with respect to a Constituent (or Successor Constituent), selecting a replacement underlying Constituent having similar characteristics to the cancelled or modified Constituent).

## **8. Index Sponsor and Index Calculation Agent**

### **8.1 Identity and responsibilities**

JPMS plc currently acts as Index Sponsor (which expression includes any successor in such capacity) and therefore owns all intellectual property rights with respect to the Index. The Index Sponsor is responsible for, among other things, the creation and design of the Index, the documentation of the Index Rules, and the appointment of the calculation agent of the Index. The Index Sponsor may at any time and for any reason terminate the appointment of an Index Calculation Agent and appoint an alternative entity as the replacement Index Calculation Agent. The Index Sponsor shall be entitled to make certain adjustments to the Index pursuant to Section 9 of these Index Rules. Furthermore, JPMS plc currently acts as the Index Calculation Agent; however, the Index Sponsor may assign the role of Index Calculation Agent to any affiliate, subsidiary or third party, and, upon its acceptance of such role, such affiliate, subsidiary or third party shall assume all duties and responsibilities of the Index Calculation Agent. The Index Calculation Agent will (unless it is the same entity) be an agent of the Index Sponsor. The Index Calculation Agent's determinations in respect of the Index and interpretations of these Index Rules shall be final.

The Index Calculation Agent is responsible for:

- a) calculating the Index Level for each Calculation Day in accordance with the Index Rules; and
- b) determining (subject to the prior agreement of the Index Sponsor) if a Market Disruption Event, Disrupted Day, Extraordinary Event (or other similar event) has occurred, assessing the related consequences and implementing any necessary adjustments in accordance with the Index Rules.

The Index Sponsor may delegate and/or transfer any of its obligations or responsibilities in connection with the Index to one or more entities which it determines are appropriate.

### **8.2 Standards and Determinations**

- a) Each of the Index Sponsor and the Index Calculation Agent must act in good faith and in a commercially reasonable manner in respect of determinations, adjustments, amendments and calculations made by it pursuant to the Index Rules.
- b) Unless otherwise provided, all determinations, adjustments, amendments and calculations of the Index Sponsor and the Index Calculation Agent pursuant to the Index Rules will be final, conclusive and binding absent manifest error. The term "manifest error" means a plain and obvious error which can be identified from the results of the calculation or determination without recourse to any underlying data or any formulae.
- c) No person shall be entitled to make any claim against the Index Sponsor or the Index Calculation Agent in respect of any determination, adjustment or calculation made pursuant to the Index Rules. Neither the Index Sponsor nor the Index Calculation Agent shall:
  - (i) be under any obligation to revise any determination or calculation made or action taken for any reason in connection with the Index; or
  - (ii) have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the Index or in respect of the publication of any Index Level (or failure to publish such level) or any use to which any person may put the Index or the Index Levels.

### **8.3 Duties of Care and Fiduciary Duties**

Subject to the regulatory obligations of the Index Sponsor and Index Calculation Agent, neither the Index Sponsor nor the Index Calculation Agent acts on behalf of, or accepts any duty of care or any fiduciary duty with respect to any person.

## **9. Amendments**

Economic, market, regulatory, legal, judicial, political, financial or other circumstances may arise which would, in the opinion of the Index Sponsor, necessitate or make desirable a modification or amendment to the Index Rules.

Accordingly and without prejudice to the other applicable adjustment provisions, the Index Sponsor is entitled to make such modifications and/or amendments to the Index Rules as it in its reasonable discretion deems appropriate. Such changes may include (without limitation):

- a) correcting or curing any errors or defective or contradictory provisions;
- b) implementing modifications to the methodology described in the Index Rules (including, without limitation, a change in the frequency of calculation of the Index Level) which the Index Sponsor determines would assist in maintaining the intended commercial purpose of the Index or which are necessary or desirable in order for the calculation of the Index to continue notwithstanding any market, regulatory, legal, judicial, political or financial circumstances which were not reasonably foreseeable by the Index Sponsor as of the Live Date and which were not deliberately caused by the Index Sponsor. In deciding on the necessary or desirable course of action, the Index Sponsor will consider what, in the determination of the Index Sponsor, is the commercial purpose of the Index and will take into account any related hedging arrangements; or
- c) implementing modifications of a formal, minor or technical nature required to preserve the intended commercial purpose of the Index.

The Index Sponsor will:

- a) ensure that any amendments made in accordance with this Section 9 will result in an Index methodology which, in the Index Sponsor's determination, is consistent with the intended commercial purpose of the Index as of the Live Date; and
- b) notify the Index Calculation Agent before exercising any discretion conferred upon it by this Section 9. In the instance where the Index Sponsor and the Index Calculation Agent are separate entities, the Index Sponsor may, but is not obliged to, take into account the views of the Index Calculation Agent on any proposed amendment.

Following any amendment, the Index Sponsor will make available a revised version of the Index Rules as specified in Section 14 and will include the effective date of such amendment in the amended version of the Index Rules. However, the Index Sponsor is under no obligation to inform any person about any amendments to the Index (except as required by law).

The Index Sponsor may, in its reasonable discretion, at any time and without notice, terminate the calculation and publication of the Index.

## **10. Synthetic Exposure**

The Index is constructed on “notional” or synthetic exposure to the Constituents. There is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest.

## **11. No offer of securities**

The Index Rules do not constitute investment, taxation, legal, accounting or other advice, whether advice within the meaning of Article 53 of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001 or investment advice within the meaning of Article 4(4) of the Markets in Financial Instruments Directive 2004/39/EC or otherwise. In constructing, calculating or otherwise performing any activity with respect to the Index, the Index Sponsor or the Index Calculation Agent (as the case may be) is solely using information that is already in the public domain.

The Index Rules neither constitute an offer to purchase or sell securities nor specific advice in any form whatsoever (investment, tax, legal, accounting or regulatory) in respect of any investment in any strategy, instrument or Product.

## 12. General Definitions

Capitalised terms defined below shall have the following meanings in the Index Rules.

<b>"Basket Index"</b>	shall have the meaning ascribed thereto in Section 3.7;
<b>"Bloomberg"</b>	means Bloomberg Financial Markets (or any successor thereto);
<b>"Calculation Day"</b>	means any day that is not a Saturday or a Sunday;
<b>"Calculation Day<sub>t</sub>"</b>	means, with respect to any calculation, the Calculation Day on which such calculation occurs;
<b>"Calculation Day<sub>t-1</sub>"</b>	means in respect of Calculation Day <sub>t</sub> , the Calculation Day immediately preceding Calculation Day <sub>t</sub> ;
<b>"Calculation Day<sub>t-2</sub>"</b>	means in respect of Calculation Day <sub>t</sub> , the Calculation Day immediately preceding Calculation Day <sub>t-1</sub> ;
<b>"Change in Law"</b>	means, on or after 7 June 2013:  a) due to:  (i) the adoption of, or any change in, any applicable law, regulation or rule (including, but not limited to, any tax law); or  (ii) the promulgation of, or any change in, the interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law, rule, regulation or order (including, but not limited to, rules or regulations promulgated by the U.S. Commodity and Futures Trading Commission or exchange or trading facility),  in each case, the Index Calculation Agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Constituent or any transaction referencing any contract referenced by a Constituent or, (y) holding a position in any contract referenced by a Constituent or any transaction referencing any contract referenced by a Constituent is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule, regulation or order in relation to such contract referenced by such Constituent traded on any exchange(s) or other trading facility (including, but not limited to, the Relevant Exchange); or  b) the occurrence or existence of any:  (i) suspension or limitation imposed on trading the contracts referenced by a Constituent; or  (ii) any other event that causes trading in the contracts referenced by a Constituent to cease;
<b>"Component"</b>	shall have the meaning ascribed thereto in Section 3.7;
<b>"Constituent"</b>	shall have the meaning ascribed thereto in Section 1;
<b>"Constituent<sub>c</sub>"</b>	means, in respect of any calculation, the relevant Constituent, in respect of which such calculation occurs;
<b>"Constituent Level"</b>	shall have the meaning ascribed thereto in Section 2.1;
<b>"Disrupted Day"</b>	means, with respect to any Calculation Day and any or all Constituents (as the case may be), a day on which a Market Disruption Event has occurred or is continuing;



<b>“Exchange 1 Business Day”</b>	means, with respect to the futures referenced by Constituents 1, 2, 3 and 4 (as set forth in Table A in Section 2.2), any day on which the Relevant Exchange 1 is scheduled to be open for trading;
<b>“Exchange 2 Business Day”</b>	means, with respect to the futures referenced by Constituents 5, 6, 7 and 8 (as set forth in Table A in Section 2.2), any day on which the Relevant Exchange 2 is scheduled to be open for trading;
<b>“Holding Period”</b>	shall have the meaning ascribed thereto in Section 3.4;
<b>“Indicator”</b>	shall have the meaning ascribed thereto in Section 3.6;
<b>“Index”</b>	shall have the meaning ascribed thereto in Section 1;
<b>“Index Base Date”</b>	shall have the meaning ascribed thereto in Section 4.1;
<b>“Index Calculation Agent”</b>	shall have the meaning ascribed thereto in Section 1;
<b>“Index Level”</b>	shall have the meaning ascribed thereto in Section 1;
<b>“Index Leverage”</b>	shall have the meaning ascribed thereto in Section 3.8;
<i>“IndexMaxLeverage”</i>	shall have the meaning ascribed thereto in Section 3.8;
<i>“IndexMinLeverage”</i>	shall have the meaning ascribed thereto in Section 3.8;
<b>“Index Rules”</b>	shall have the meaning ascribed thereto in Section 1;
<b>“Index Sponsor”</b>	shall have the meaning ascribed thereto in Section 1;
<i>“IndexTargetVol”</i>	shall have the meaning ascribed thereto in Section 3.8;
<b>“Live Date”</b>	shall have the meaning ascribed thereto in Section 1;
<b>“Market Disruption Event”</b>	means, with respect to any Constituent and any Calculation Day, the failure of the index calculation agent for any such Constituent to publish a closing index level in respect of such Constituent;
<b>“Moving Average Indicator”</b>	shall have the meaning ascribed thereto in Section 3.3;
<b>“Product”</b>	shall have the meaning set forth in Section “Notices, Disclaimers and Conflicts” herein;
<b>“Rebalancing Day”</b>	shall have the meaning ascribed thereto in Section 3.7;
<b>“Relevant Exchange”</b>	means, with respect to the futures referenced by Constituents 1, 2, 3 and 4 (as set forth in Table A in Section 2.2), Relevant Exchange 1; and, with respect to the futures referenced by Constituents 5, 6, 7 and 8 (as set forth in Table A in Section 2.2), Relevant Exchange 2;
<b>“Relevant Exchange 1”</b>	means the Chicago Mercantile Exchange or any successor thereto;
<b>“Relevant Exchange 2”</b>	means the ICE Futures Europe Financial Exchange or any successors thereto;
<b>“Relevant Person”</b>	shall have the meaning set forth in Section “Notices, Disclaimers and Conflicts” herein;
<b>“Scheduled Constituent<sub>c</sub> Trading Day A”</b>	means any day that is (a) an Exchange 1 Business Day and (b) a day, other than a Saturday or a Sunday, on which commercial banks in London, England are scheduled to be open for business;
<b>“Scheduled Constituent<sub>c</sub> Trading Day B”</b>	means any day that is (a) an Exchange 2 Business Day and (b) a day, other than a Saturday or a Sunday, on which commercial banks in London, England are scheduled to be open for business;
<b>“Scheduled Index Trading Day”</b>	means any day that is (a) an Exchange 1 Business Day and (b) an Exchange 2 Business Day and (c) a day, other than a Saturday or a Sunday, on which commercial banks in London, England and New York, New York are scheduled to be open for business;
<b>“Simple Moving Average”</b>	shall have the meaning ascribed thereto in Section 3.1;
<b>“SL Return”</b>	shall have the meaning ascribed thereto in Section 3.5;
<b>“SMA Indicator”</b>	shall have the meaning ascribed thereto in Section 3.1;



<b>"SMA Observation Period"</b>	shall have the meaning ascribed thereto in Section 3.1;
<b>"Stop-Loss Indicator"</b>	shall have the meaning ascribed thereto in Section 3.5;
<b>"Successor Constituent"</b>	shall have the meaning ascribed thereto in Section 7.1;
<b>"USD"</b>	means the U.S. dollar or any successor currency that is the lawful currency of the United States of America;
<b>"Volatility Measure<sub>MA</sub>"</b>	shall have the meaning ascribed thereto in Section 3.3;
<b>"Volatility Observation Period 1"</b>	shall have the meaning ascribed thereto in Section 3.8;
<b>"Volatility Observation Period 2"</b>	shall have the meaning ascribed thereto in Section 3.8;
<b>"Volatility Observation Period<sub>MA</sub>"</b>	shall have the meaning ascribed thereto in Section 3.3;
<b>"Weighted Moving Average"</b>	shall have the meaning ascribed thereto in Section 3.2;
<b>"WMA Indicator"</b>	shall have the meaning ascribed thereto in Section 3.2;
<b>"WMA Observation Period"</b>	shall have the meaning ascribed thereto in Section 3.2; and
<b>"WMA Start Date<sub>t</sub>"</b>	shall have the meaning ascribed thereto in Section 3.2.

### 13. Mathematical Functions

Throughout the Index Rules, certain mathematical symbols and functions are used. Unless otherwise specified, these symbols and functions will have the following meanings:

$Max( \ )$	means the maximum of the numbers separated by commas and enclosed in parentheses.
$Min( \ )$	means the minimum of the numbers separated by commas and enclosed in parentheses.
$\sqrt{\quad}$	means the square root of a number.
$\sum$	means the sum of values over the specified range.

#### 14. Versions of the Index Rules and Index Adjustments

Any amendment or adjustment to the Index Rules for the Index and the effective date of any such amendment or adjustment may but does not have to be reflected in a revised version of the Index Rules. Copies of the latest issue of the Index Rules and/or details of relevant adjustments (where not reflected in a revised version of the Index Rules) may be obtained by prospective purchasers or holders of Products free of charge on request to the Index Sponsor at its principal office in London. In each case this will be against such proof of Product holder or prospective purchaser status as the Index Sponsor may require in its reasonable discretion.

Version	Date	Amendment
1.0	7 June 2013	Not Applicable (First Release)
2.0	24 April 2015	Amendment of certain typos (Second Release)
3.0	26 September 2016	Amendments include (i) clarification of the length of certain periods, including via corrections to the specified numbers of days comprising observation periods related to: (a) the calculation of the Simple Moving Average (in Section 3.1) and the Weighted Moving Average (in Section 3.2) and (b) implementation schedules for application of the Moving Average Indicator (in Section 3.3) and the Stop Loss Indicator (in Section 3.5); (ii) removal of the concept of “Rebalancing Determination Day” and clarification of the scheduled monthly Rebalancing Day as the first (1 <sup>st</sup> ) Scheduled Index Trading Day of each calendar month (in Section 3.7); (iii) correction of typographical or manifest errors in certain formulae, including the formulae for $WMA_t^c$ and $divisor_t^c$ and the related definition of $dc$ (in Section 3.2) and the formula for calculation of $IndexLeverage_{RD,t}$ in Section 3.8; (iv) removal of a non-operative example from Section 3.4; (v) relabelling of the “adjusted Constituent Level” as a “Component” of the Index and distinguishing the date as of which each such Component was set equal to 100 (1 June 1999) from the Index Base Date (1 October 1999) as of which date the Index Level was set equal to 100; and (vi) typographical corrections and conforming changes throughout the document reflecting the consistent incorporation of the corrections listed above, including clarifications related to: (a) the impact of Market Disruption Events on identification of Calculation Days and Rebalancing Days and the timing of rebalancings and calculation and publication of Index Levels and (b) the operation of the Stop Loss feature of the Index (Third Release)