J.P. Morgan FX Value Index Series Index Rules

J.P.Morgan

June 27, 2016, as amended on 2 January 2018 © All Rights Reserved

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PART A

General Terms

1. This Document

1.1 Introduction

This document comprises the rules for the J.P. Morgan FX Value Index Series.

The Index Rules for each Index comprise:

- (a) this Part A, which sets out the general terms of the Index;
- (b) Part B, which sets out certain specifications with respect to the calculation of the Index. The definitions for the Index are also contained in Part B; and
- (c) the Applicable Module, which sets out information relating to a specific Index, including (among other things): (1) the name of the Index and its Bloomberg ticker, (2) the Index Currency and (3) other specific rules or information applicable to that Index.

1.2 Publication and availability of the Index Rules

The Index Rules are published by J.P. Morgan Securities plc of 25 Bank Street, Canary Wharf, London E14 5JP, in its capacity as Index Sponsor.

Copies of the Index Rules may be obtained by holders of investments linked to the Index free of charge on request from the Index Sponsor.

1.3 Amendments

Economic, market, regulatory, legal, financial or other circumstances may arise that may necessitate or make desirable an amendment of the Index Rules.

Notwithstanding the foregoing, the Index Sponsor may amend the Index Rules as it deems appropriate. Such amendments may include (without limitation):

- (a) correcting or curing any errors, omission or contradictory provisions; or
- (b) modifications to the methodology described in the Index Rules (including, without limitation, a change in the frequency of calculation of the Index Level) that are necessary or desirable in order for the calculation of the Index to continue notwithstanding any economic, market, regulatory, legal, financial or other circumstances as of the Index Live Date of the Index; or
- (c) modifications of a formal, minor or technical nature.

The Index Sponsor will notify the Index Calculation Agent (if a different entity than the Index Sponsor) before making an amendment pursuant to this Section 1.3. The Index Sponsor may, but is not obliged to, take into account the views of the Index Calculation Agent regarding any proposed amendment.

Following any amendment, the Index Sponsor will make available (as soon as practicable) the amended version of the Index Rules and will include the effective date of such amendment in the new 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.

1.4 No advice or offer of securities

The Index Rules do not constitute investment, taxation, legal, accounting or other advice, including within the meaning of Article 53 of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001 or Article 4(4) of the Markets in Financial Instruments Directive 2004/39/EC. 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 or information that is otherwise available through license from a relevant data provider.

The Index Rules neither constitute an offer to purchase or sell securities nor constitute specific advice of whatever form (tax, legal, accounting or regulatory) in respect of any investment index or investment that may be linked to any index.

1.5 No Duties of Care and No Fiduciary Duties

Pursuant to the Index Rules, neither the Index Sponsor nor the Index Calculation Agent acts on behalf of, accepts any duty of care or any fiduciary duty to any person.

1.6 The Index is synthetic

The Index references a "notional" or synthetic exposure to the Constituents and there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Index merely identifies the Constituents and a rules-based trading index, the performance of which is used as a reference point for calculating Index Levels.

2. Index Sponsor and Index Calculation Agent

2.1 Identity

J.P. Morgan Securities plc is the sponsor of each Index within the Series (the "Index Sponsor").

In respect of the Index, the Index Sponsor may designate any entity (including a non-related third party) from time to time to act as calculation agent in connection with such Index (the "Index Calculation Agent"). Unless the Index Sponsor designates another entity as the Index Calculation Agent for an Index, the Index Sponsor shall be the Index Calculation Agent for the Index. As of the Index Live Date, the Index Sponsor has initially designated itself as the Index Calculation Agent for the Index.

2.2 Index Sponsor and Index Calculation Agent standards

Each of the Index Sponsor and the Index Calculation Agent shall act in good faith and in a commercially reasonable manner in respect of determinations, interpretations and calculations made by it pursuant to the Index Rules.

2.3 Index Sponsor and Index Calculation Agent determinations

All determinations, interpretations and calculations of the Index Sponsor and the Index Calculation Agent relating to the Index Rules shall be final, conclusive and binding and no person shall be entitled to make any claim against the Index Sponsor, the Index Calculation Agent or any Relevant Person in respect thereof. None of the Index Sponsor, the Index Calculation Agent or any Relevant Person shall:

- (a) be under any obligation to revise any determination, interpretation or calculation made or action taken for any reason in connection with the Index Rules or the Index; or
- (b) have any responsibility to any person for any determination, interpretation or calculation made or anything done (or omitted to be done) (whether as a result of negligence or otherwise) in respect of the Index or in respect of the publication of the Index Level (or failure to publish such level) or any use to which any person may put the Index or the Index Levels.

"Relevant Person" means each of the Index Sponsor, the Index Calculation Agent and each of their respective affiliates and subsidiaries and their respective directors, officers, employees, representatives, delegates and agents.

3. Index Levels

3.1 Index Base Level and Index Base Date

The Index Base Level and Index Base Date of the Index are specified in the Applicable Module. The Index Calculation Agent started calculating the Index on a live basis on the Index Live Date, as specified in the Applicable Module.

3.2 Publication of Index Levels

Unless an Index Calculation Day is a Disrupted Day, the Index Calculation Agent shall calculate and publish (in a manner determined by the Index Calculation Agent from time to time) the Index Level in respect of each Index Calculation Day in accordance with the Index Rules. Notwithstanding anything to the contrary, the Index Calculation Agent may cease publishing the Index Level at any time in its sole discretion and nothing in this document shall be construed as an agreement by the Index Calculation

Agent to continue to calculate the Index Level if the Index Calculation Agent has elected to cease publication.

All Index Levels are rounded to two (2) decimal points before being published in the Index Currency. Notwithstanding anything to the contrary, the Index Calculation Agent may calculate the Index Level to a higher level of specificity and such levels shall be used for all determinations made herein.

4. Corrections in respect of an Index

In respect of the Index, if:

- (a) the level or price of any Constituent or other variable, input or other parameter that is used to calculate the Index Level for any Index Calculation Day is subsequently changed or corrected and the change or correction is published by the relevant publication source; or
- (b) the Index Calculation Agent identifies an error or omission in any of its calculations or determinations with respect to the Index Level of the Index in respect of any Index Calculation Day,

then the Index Calculation Agent may, if practicable and if it considers such correction material, correct the published Index Level for such day and/or each subsequent Index Calculation Day. The Index Calculation Agent shall publish (in such manner determined by the Index Calculation Agent) such corrected Index Level(s) as soon as reasonably practicable.

5. Market Disruption Events

If an Index Calculation Day is a Disrupted Day, then the Index Calculation Agent will not calculate or publish the Index Level for such Index Calculation Day and will suspend the calculation and publication of the Index Level until the first succeeding Index Calculation Day that is not a Disrupted Day.

6. Extraordinary Events

6.1 Successor Reference Data

If an FX Tracker or any data (including Purchasing Power Parity) referenced by an FX Tracker or an Index is (a) not calculated and announced by the sponsor of the FX Tracker, the applicable data provider or the sponsor of such data but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or (b) replaced by a successor index or successor data using, in the determination of the Index Calculation Agent, the same or substantially similar formula for and method of calculation as used in the calculation of the relevant FX Tracker or data, then such index or reference data so calculated and announced by that successor index sponsor, data provider or that successor reference data sponsor, as the case may be, shall be deemed the relevant FX Tracker or reference data with effect from a date determined by the Index Calculation Agent who may make such adjustments to these Index Rules as it determines appropriate to account for such change.

6.2 Material Change in the Method or Formula of calculating an FX Tracker or other Reference Data

On any Index Calculation Day, if any sponsor, data provider or other non-affiliated third party person with control over an FX Tracker or any data (including Purchasing Power Parity) referenced by an Index or an FX Tracker (e.g., a spot rate) makes a material change in the formula for or the method of calculating an FX Tracker or reference data, then the Index Calculation Agent may make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology or detail in these Index Rules to account for such modification. Such adjustment may occur prior to, on or after the date of such material change, depending on when such change is announced and when the Index Calculation Agent becomes aware of such change.

6.3 Non-Publication of a Constituent as a result of Cancellation of a Constituent

On any Index Calculation Day, if the sponsor of an FX Tracker or a data provider permanently cancels or ceases to publish such FX Tracker or any reference data (including Purchasing Power Parity), and no suitable successor index or data exists, the Index Calculation Agent shall either:

- (a) make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to any Index to account for such cancellation, including but not limited to excluding or substituting the affected FX Tracker or data; or
- (b) cease to calculate and publish the Index Level.

Such adjustment may occur prior to, on or after the date of such cancellation, depending on when such cancellation is announced and when the Index Calculation Agent becomes aware of such change.

6.4 Change in Law

Without prejudice to the ability of the Index Calculation Agent to amend these Index Rules, the Index Calculation Agent may:

- (a) exclude; or
- (b) substitute,

any Constituent or other reference data following (i) the occurrence (and/or continuation) of a Change in Law or (ii) in circumstances where it considers it reasonably necessary to do so, including (without prejudice to the generality of the foregoing) any perception among market participants generally that the published value of the relevant Constituent or other reference data is inaccurate (e.g., an applicable spot rate does not accurately reflect the value in the markets). If such an event occurs, then the Index Calculation Agent may adjust these Index Rules as it determines to be appropriate to account for such inaccuracy on such date(s) selected by the Index Calculation Agent.

The Index Calculation Agent is under no obligation to continue the calculation and publication of the Index upon the occurrence or existence of a Change in Law.

6.5 Cancellation of a License or Impairment of Intellectual Property Rights relating to data

If, at any time, any necessary license granted to the Index Calculation Agent, the Index Sponsor or any of their respective affiliates to use any data used to calculate the Index or any Constituent (including but not limited to any price, level or value used in calculating the Index or any Constituent) terminates, or the Index Calculation Agent's rights to use any data used to calculate the Index or any Constituent (including but not limited to any price, level or value used in calculating the Index or any Constituent) is otherwise disputed, impaired or ceases (for any reason), the Index Calculation Agent may replace such data with a successor that is the same or substantially similar and may make such adjustments to these Index Rules as it determines to be appropriate to account for such event on such dates as selected by the Index Calculation Agent.

7. Hypothetical Back-Tested Levels

Any Index Level prior to the Index Live Date is a hypothetical, back-tested level. Such levels should not be taken as an indication of future performance, and no assurance can be given as to the levels or performance of the Index on a future date. Back-tested results are achieved by means of a retroactive application of a back-tested model designed with the benefit of hindsight. The Index Calculation Agent, in calculating hypothetical back-tested index levels, may have applied the disruption provisions specified in these Index Rules differently than it otherwise would have applied such provisions in a "live" calculation scenario. Additionally, the precision and rounding of the levels of the Index or the Constituents (or other calculated values) may differ from the methodology applied on a going forward basis. In calculating the hypothetical back-tested levels, the Index Calculation Agent may have made certain assumptions in respect of the timing surrounding the publication of certain indicators, Constituent closing levels and Index levels. These assumptions may have a material impact on the hypothetical back-tested levels occurring on or before the Index Live Date. No representation is made that any investment that references the Index will or is likely to achieve returns similar to any hypothetical back-tested returns. Alternative modelling techniques or assumptions might provide different results. Finally, hypothetical back-tested results of past performance are neither an indicator nor a guarantee of future performance or returns. Actual results and performance may vary compared to such hypothetical back-tested levels.

Part B

1. Introduction

The rules set out in this Part B apply to the Index specified in the Applicable Module to this Part B. The Index Rules for the Index are comprised of Part A of this document, this Part B and the Applicable Module to this Part B.

The Index Calculation Agent will determine the Index Level for each Index Calculation Day, subject to and in accordance with these Index Rules, by implementing the following steps:

Step 1: Determine the Purchasing Power Parity of each Currencyi

In respect of an Index Calculation Day_t and a Currency_i, the Index Calculation Agent shall determine the Purchasing Power Parity (the "**Purchasing Power Parity**" or "**PPP**_{i,t}") for such Currency_i against USD (expressed as unit(s) of Currency_i per one unit of USD).

The Purchasing Power Parity shall be the purchasing power parity estimate published by the OECD in respect of the year falling two (2) calendar years preceding such Index Calculation Day_t (the "**given year T**"). The estimate of such $PPP_{i,t}$ for the given year T to be used on such Index Calculation Day_t shall be determined as follows:

- (a) in respect of an Index Calculation Day_t up to and including 31 December 2016, the Purchasing Power Parity shall be the value specified in Appendix C as at the Index Live Date; and
- (b) in respect of an Index Calculation Day_t from and including 1 January 2017, the Purchasing Power Parity shall be the value published on the Bloomberg Page specified in the Applicable Module for such Currency_i on the first Index Calculation Day of the year such that, in respect of an Index Calculation Day_t falling in 2017, the Purchasing Power Parity shall be the value corresponding to given year T as 2015 as published on the first Index Calculation Day falling in 2017. This Purchasing Power Parity value shall generally be the "third estimate" (as described below). Any revision of the Purchasing Power Parity value for a given year T falling on a day after the first Index Calculation Day of the year shall not be used by the Index Calculation Agent.

What are PPPs?

The PPPs are the rates of currency conversion that equalise the purchasing power of different currencies by eliminating the differences in price levels between countries. In their simplest form, PPPs are simply price relatives that show the ratio of the prices in national currencies of the same good or service in different countries. Further details of PPPs are currently available at: http://www.oecd.org/std/purchasingpowerparities-frequentlyaskedquestionsfags.htm#FAO5.

Notwithstanding anything to the contrary, the immediately preceding hyperlink is attached only for reference purposes only and any content on such website is not incorporated into these Index Rules.

When are PPPs updated and revised?

PPPs for a given year T are published by the Organisation for Economic Co-Operation and Development (OECD) in five steps:

- At T+2 months: first PPP estimates, for GDP only
- At T+6 months: second PPP estimates, based on detailed extrapolations, for GDP, households' Actual Individual Consumption (AIC) and Individual Household Consumption (IHC)
- At T+12 months: third PPP estimates, incorporating all price and expenditure data for year T
- At T+24 months: fourth PPP estimates, incorporating updated expenditure estimates
- At T+36 months: final PPP estimates for year T

PPPs may be subject to further subsequent revision by the OECD at a later time.

Further information on the revision of PPPs is available on the <u>Eurostat website</u> and further information on historical time series is available via the hyperlink set out above.

Step 2: Determine the Signals

In respect of each Index Calculation Day_t and each Currency_i, the Index Calculation Agent shall determine a relative value signal (the "**Signal**").

In respect of any Currency_i (other than USD) and Index Calculation Day_b the Signal ("**Signal**_{i,t}") shall be determined by the Index Calculation Agent in accordance with the following formula:

$$Signal_{i,t} = ln\left(\frac{PPP_{i,t}}{Spot Rate_{i,t}}\right)$$

A positive signal indicates that the applicable Currency is deemed overvalued whereas a negative signal indicates that the applicable currency is deemed undervalued.

In respect of USD and Index Calculation Day_t:

$$Signal_{i,t} = 0$$

Where:

 $Spot\ Rate_{i,t}$ means, in respect of Index Calculation Day_t and $Currency_i$, the spot rate of such $Currency_i$ against USD (expressed as unit(s) of $Currency_i$ per one unit of USD) as determined by the Index Calculation Agent by reference to the USD Spot Rates published by the WM Company at or around 4 p.m. London time on such Index Calculation Day_t on the relevant Reuters Page specified in the Applicable Module (or any successor page that replaces the relevant page on that service) or if such page or service is unavailable, the Index Calculation Agent's good faith determination of such rate.

 $PPP_{i,t}$ has the meaning set forth in Step 1.

Step 3: Determine the Weights

In respect of each Index Calculation Day_t and each Currency_i, the Calculation Agent shall determine the currency weight (the "Weight").

In respect of any Currency_i and Index Calculation Day_t, the Weight ("**Weight**_{i,t}") shall be determined by the Index Calculation Agent in 3 steps.

Firstly the Index Calculation Agent will determine the uncapped weights (" $\mathbf{W1}_{i,t}$ ") in respect of each Currency_i and Index Calculation Day_t in accordance with the following formula:

$$W1_{i,t} = -Signal_{i,t} + Avg_{Currencies}(Signal_{i,t})$$

Where:

 $Avg_{Currencies}(Signal_{i,t})$ means, in respect of each Index Calculation Day_t the average of the Signals across all Currencies in respect of such Index Calculation Day_t, determined in accordance with the following formula:

$$Avg_{Currencies}(Signal_{i,t}) = \frac{1}{n} \sum_{i=1}^{n} Signal_{i,t}$$

Where:

n means, the total number of Currencies.

Secondly, the Index Calculation Agent will cap the total leverage to 400% (the sum of the absolute value of all the currency weights, " $\mathbf{W2_{i,t}}$ "). In respect of each Currency_i and Index Calculation Day_t the Index Calculation Agent will determine " $\mathbf{W2_{i,t}}$ " in accordance with the following formula:

$$W2_{i,t} = W1_{i,t} \times \frac{400\%}{\max(400\%, \sum_{i=1}^{n} abs(W1_{i,t}))}$$

Finally, the Index Calculation Agent will cap the individual weights to 100%. In respect of each Currency_i and Index Calculation Day_t the Index Calculation Agent will determine the Weight ("**Weight**_{i,t}") in accordance with the following formula.

$$Weight_{i,t} = \begin{cases} min(W2_{i,t}, 100\%), & if \ W2_{i,t} \ge 0 \\ max(W2_{i,t}, -100\%), & if \ W2_{i,t} < 0 \end{cases}$$

Step 4: Determine the Index Level

In respect of the Index Base Date and the first Index Calculation Day after the Index Base Date, the Index Level equals 100.

In respect of each Index Calculation Day_t thereafter, that is not a Disrupted Day, the Index Calculation Agent shall determine the Index Level ("**Index**_t") in accordance with the following formula:

$$Index_{t} = Index_{t-1} + Index_{t-2} \times \sum_{i=1}^{n} \left(Weight_{i,t-2} \times \left(\frac{Tracker_{i,t}}{Tracker_{i,t-1}} - 1 \right) \right)$$

Where:

n means, the total number of Currencies.

 $Index_{t-1}$ means, the Index Level in respect of Index Calculation Day_{t-1};

 $Index_{t-2}$ means, the Index Level in respect of Index Calculation Day_{t-2};

Tracker_{i,t} means, in respect of Index Calculation Day_t and Currency_i, (other than USD) the Index Level (as defined in the FX Tracker Rules) of the FX Tracker corresponding to Currency_i in respect of such Index Calculation Day_t;

 $Tracker_{i,t-1}$ means, in respect of Index Calculation Day_{t-1} and Currency_i, (other than USD) the Index Level (as defined in the FX Tracker Rules) of the FX Tracker corresponding to Currency_i in respect of such Index Calculation Day_{t-1}; and

Weight_{i,t-2} means, the Weight in respect of Index Calculation Day_{t-2} and Currency_i.

For USD,
$$\frac{Tracker_{i,t}}{Tracker_{i,t-1}}$$
 is a quantity equal to 1.

If, in respect of an Index Calculation Day, the calculations referenced in Step 4 would result in an Index Level that is less than or equal to zero, the Index Level for that Index Calculation Day and each subsequent Index Calculation Day shall be deemed to be zero.

2. Definitions of Terms

In respect of the Index, the terms defined below shall have the following meanings in the Index Rules:

"Applicable Module" means, in respect of an Index, the module which is applicable to that Index and attached to these Index Rules.

"AUD" means the Australian dollar, which is the lawful currency of Australia, or any successor currency thereto.

"CAD" means the Canadian dollar, which is the lawful currency of Canada, or any successor currency thereto.

"Change in Law" means on or after the Index Live Date due to (i) the adoption of, or any change in, any applicable law, regulation, order or rule (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 (ii) due to the promulgation of, or any change in, the announcement or statement of the formal or informal interpretation, application, exercise or operation by any court, tribunal or regulatory authority (or any representative thereof) with competent jurisdiction of any applicable law, regulation, order or rule (including, without limitation, rules or regulations promulgated or implemented by the U.S. Commodity and Futures Trading Commission, the U.S. Securities and Exchange Commission or any exchange or trading facility), in the case of (i) or (ii) the Index Calculation Agent determines that (x) it is contrary to such law, regulation, order or rule for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any financial asset, transaction or interest in or relating to a Constituent or any component of a Constituent or (y) holding a position in any financial asset, transaction or interest in or relating to a Constituent or any component of 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, regulation, order or

"Constituents" means, in respect of an Index, any USD Spot Rate, FX Tracker or Purchasing Power Parity referenced by such Index.

"Convertibility Event" means, in respect of an Index Calculation Day and a Currency, an event that, in the Index Calculation Agent's determination, prevents, restricts or delays market participants' ability to:

- (a) convert a Currency to USD (or vice versa) through customary legal channels; or
- (b) convert a Currency to USD (or vice versa) at a rate at least as favourable as the rate for domestic institutions located in the applicable Currency Jurisdiction.

"Currency" means, in respect of an Index, each Currency listed in the Applicable Module.

"Currency Jurisdiction" means the country or economic union generally associated with a Currency, as determined by the Index Calculation Agent.

"CZK" means the Czech koruna, which is the lawful currency of the Czech Republic, or any successor currency thereto.

"Deliverability Event" means, in respect of an Index Calculation Day and a Currency, an event that, in the Index Calculation Agent's determination, prevents, restricts or delays market participants' ability to:

- (a) deliver such Currency from accounts inside the applicable Currency Jurisdiction to accounts outside of such Currency Jurisdiction; or
- (b) deliver such Currency between accounts inside the applicable Currency Jurisdiction or to a party that is a non-resident of such Currency Jurisdiction.

"Discontinuity Event" means, in respect of an Index Calculation Day and a Currency, the occurrence or continuation of the pegging of such Currency to USD (or vice versa), the imposition of a "hard" or "soft" floor to the exchange rate of or the controlled appreciation or devaluation by the applicable Currency Jurisdiction (or any political subdivision or regulatory authority thereof) of such Currency to USD (or vice versa), as determined by the Index Calculation Agent in good faith and a commercially reasonable manner.

"Disrupted Day" means, in respect of an Index, any Index Calculation Day on which a Market Disruption Event has occurred or is continuing.

"EUR" or "Euro" means the lawful single currency of the member states of the European Union that have adopted and continue to retain a common single currency through monetary union in accordance with European Union treaty law (as amended from time to time).

"FX Tracker" means, in respect of an Index, each J.P. Morgan FX Tracker Index listed in the Applicable Module.

"**FX Tracker Rules**" means the J.P. Morgan FX Tracker Indices Index Rules dated 26 November 2014, as last amended 27 May 2015, as may be further amended from time to time.

"GBP" means British pounds sterling, which is the lawful currency of the United Kingdom, or any successor currency thereto.

"HUF" means the Hungarian forint, which is the lawful currency of Hungary, or any successor currency thereto.

"Index" has the meaning given to it in the "Notices, Disclaimers and Conflicts" section.

"Index Base Date" means, in respect of an Index, the date specified as such in the Applicable Module.

"Index Base Level" means, in respect of an Index, the level specified as such in the Applicable Module.

"Index Calculation Agent" has the meaning given to it in Section 2.1 of Part A.

"Index Calculation Day" or "Index Calculation Day_t" means any calendar day on which banks are generally scheduled to be open for business in New York and London other than a Saturday, Sunday or WMR Holiday.

"Index Calculation Day_{t-1}" means, in respect of Index Calculation Day_t, the Index Calculation Day that was not a Disrupted Day immediately preceding such Index Calculation Day_t.

"Index Calculation Day_{t-2}" means, in respect of Index Calculation Day_t, the Index Calculation Day that was not a Disrupted Day immediately preceding Index Calculation Day_{t-1}.

"Index Currency" shall, in respect of an Index, have the meaning set forth in the Applicable Module.

"**Index Level**" means, in respect of an Index, the Index Level as determined in accordance with Step 3 of Part B.

"Index Live Date" means, in respect of an Index, the date specified as such in the Applicable Module.

"**Index Rules**" means the relevant parts and modules of the document that comprise the Index Rules for an Index, as specified in the table in Section 1.1 of Part A.

"Index Sponsor" has the meaning given to it in Section 2.1 of Part A.

"IPY" means Japanese yen, which is the lawful currency of Japan, or any successor currency thereto.

"Liquidity Event" means, in respect of an Index Calculation Day and a Currency, the imposition by a Currency Jurisdiction or the United States of America (or any political subdivision or regulatory authority thereof) of any capital or currency controls (such as a restriction placed on the holding of assets in or transactions through any account in such Currency Jurisdiction by a non-resident of such Currency Jurisdiction) or the publication of any notice of an intention to do so, which the Index Calculation Agent determines in good faith and in a commercially reasonable manner is likely to materially affect an investment made in the relevant Currency.

"Market Disruption Event" means, in respect of an Index, an Index Calculation Day and a Currency, either (i) a failure by the Index Sponsor (as defined in the FX Tracker Rules) to calculate and publish the Index Level (as defined in the FX Tracker Rules) in respect of such Currency within the usual or scheduled timeframe for publication of such Index Level (as defined in the FX Tracker Rules); (ii) a failure to obtain the Purchasing Power Parity in respect of such Currency within the usual or scheduled timeframe for publication of such value; or (iii) the occurrence or continuation of a Spot Market Disruption Event, each as determined by the Index Calculation Agent.

"MXN" means the Mexican peso, which is the lawful currency of Mexico, or any successor currency thereto.

"NOK" means the Norwegian krone, which is the lawful currency of Norway, or any successor currency thereto.

"NZD" means the New Zealand dollar, which is the lawful currency of New Zealand, or any successor currency thereto.

"PLN" means the Polish zloty, which is the lawful currency of Poland, or any successor currency thereto.

"Price Source Disruption" means, in respect of an Index Calculation Day and a Currency, the USD Spot Rate is not available on or in respect of such Index Calculation Day.

"Product" shall have the meaning set forth in the "Notices, Disclaimers Conflicts" section.

"Purchasing Power Parity" has the meaning given to it in Step 1 of Section 1 of Part B.

"Relevant Country" means, in respect of any Currency, the country or economic region generally associated with that Currency.

"Relevant Person" has the meaning given to it in Section 2.3 of Part A.

"RUB" means the Russian ruble, which is the lawful currency of Russia, or any successor currency thereto.

"SEK" means the Swedish krona, which is the lawful currency of Sweden, or any successor currency thereto.

"Series" has the meaning given to it in the "Notices, Disclaimers and Conflicts" section.

"Signal" has the meaning given to it in Step 1 of Section 1 of Part B.

"**Spot Market Disruption Event**" means, in respect of an Index Calculation Day and a Currency, the occurrence or continuation of any one of the following events:

- (a) a Convertibility Event;
- (b) a Deliverability Event;
- (c) a Liquidity Event;
- (d) a Taxation Event;
- (e) a Price Source Disruption; or
- (f) a Discontinuity Event.

"Taxation Event" means, in respect of an Index Calculation Day and a Currency, the implementation by any Currency Jurisdiction (or any political subdivision or regulatory authority thereof) or the publication of any notice of an intention to implement any changes to the laws or regulations relating to foreign investment in such Currency Jurisdiction (including, but not limited to, changes in tax laws and/or laws relating to capital markets and corporate ownership), which the Index Calculation Agent determines in a good faith and a commercially reasonable manner are likely to materially affect an investment made in the relevant Currency.

"TRY" means the Turkish lira, which is the lawful currency of Turkey, or any successor currency thereto.

"USD" means the U.S. dollar, which is the lawful currency of the United States of America, or any successor currency thereto.

"USD Spot Rate" means, in respect of an Index, each USD Spot Rate listed in the Applicable Module.

"Weight" has the meaning given to it in Step 2 of Section 1 of Part B.

"WMR Holiday" means a calendar day on which The WM Company does not publish fixings for the relevant USD Spot Rate. The WM Company's policy relating to the publication of fixings and holidays is currently available at:

http://www.wmcompany.com/wmr/Publications/ServiceHolidavCalendar/index.htm

Notwithstanding anything to the contrary, the immediately preceding hyperlink is attached only for reference purposes only and any content on such website is not incorporated into these Index Rules.

"ZAR" means the South African rand, which is the lawful currency of South Africa, or any successor currency thereto.

3. Mathematical functions and constants

П

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

abs()	means the absolute value of the number enclosed in parentheses.
sign()	means 1 if the number enclosed in parentheses is positive, -1 if the number enclosed in parentheses is negative, 0 if number enclosed in parentheses is equal to zero.
ln()	means the natural logarithm of the number enclosed in parentheses.
e()	means the exponential function applied to the number enclosed in parentheses.
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.
N()	means the standard Gaussian (Normal) cumulative distribution function applied to the number enclosed in parentheses.
$\sum (\)$	means the sum of the values enclosed.
$\sqrt{}$	means the square root of the number enclosed.

means the mathematical constant Pi (a number approximately equal to 3.14159265359).

4. 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 free of charge on request to the Index Sponsor at its principal office in London. This will be against such proof of Product holder status as the Index Sponsor may require in its reasonable discretion.

Version	Date	Amendment
1.0	June 27, 2016	Not Applicable (First Release)
2.0	January 26, 2017	New Modules B9, B10 and B11 added. Definition of Purchasing Power Parity amended and updated as new Step 1 in Section 1 of Part B. New Appendix C added with values for Purchase Power Parity for past years as at Index Live Date.
3.0	February 27, 2017	New Module B12 added.
4.0	January 2, 2017	Updated Table in Appendix C to reflect new PPP values that will be used for 2018

Module B1: J.P. Morgan FX Value JPFCVA01 Index

This Module B1 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA01 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA01 Index
Bloomberg ticker	JPFCVA01 <index></index>
Index Currency	USD
Index Base Date	December 30, 1999
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	AUD	PPP AS Index	JPFCTAUD Index	USDAUDFIX=WM
2	CAD	PPP CA Index	JPFCTCAD Index	USDCADFIX=WM
3	EUR	PPP EUAR Index	JPFCTEUR Index	USDEURFIX=WM
4	GBP	PPP UK Index	JPFCTGBP Index	USDGBPFIX=WM
5	JPY	PPP JN Index	JPFCTJPY Index	USDJPYFIX=WM
6	NOK	PPP NO Index	JPFCTNOK Index	USDNOKFIX=WM
7	NZD	PPP NZ Index	JPFCTNZD Index	USDNZDFIX=WM
8	SEK	PPP SW Index	JPFCTSEK Index	USDSEKFIX=WM
9	USD	not applicable	not applicable	not applicable

Module B2: J.P. Morgan FX Value JPFCVA02 Index

This Module B2 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA02 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA02 Index
Bloomberg ticker	JPFCVA02 <index></index>
Index Currency	USD
Index Base Date	December 30, 1999
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	AUD	PPP AS Index	JPFCTAUD Index	USDAUDFIX=WM
2	CAD	PPP CA Index	JPFCTCAD Index	USDCADFIX=WM
3	GBP	PPP UK Index	JPFCTGBP Index	USDGBPFIX=WM
4	NOK	PPP NO Index	JPFCTNOK Index	USDNOKFIX=WM
5	NZD	PPP NZ Index	JPFCTNZD Index	USDNZDFIX=WM
6	SEK	PPP SW Index	JPFCTSEK Index	USDSEKFIX=WM

Module B3: J.P. Morgan FX Value JPFCVA03 Index

This Module B3 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA03 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA03 Index
Bloomberg ticker	JPFCVA03 <index></index>
Index Currency	USD
Index Base Date	December 30, 1999
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	AUD	PPP AS Index	JPFCTAUD Index	USDAUDFIX=WM
2	CAD	PPP CA Index	JPFCTCAD Index	USDCADFIX=WM
3	NOK	PPP NO Index	JPFCTNOK Index	USDNOKFIX=WM
4	NZD	PPP NZ Index	JPFCTNZD Index	USDNZDFIX=WM

Module B4: J.P. Morgan FX Value JPFCVA04 Index

This Module B4 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA04 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA04 Index
Bloomberg ticker	JPFCVA04 <index></index>
Index Currency	USD
Index Base Date	December 30, 1999
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	EUR	PPP EUAR Index	JPFCTEUR Index	USDEURFIX=WM
2	GBP	PPP UK Index	JPFCTGBP Index	USDGBPFIX=WM
3	JPY	PPP JN Index	JPFCTJPY Index	USDJPYFIX=WM
4	SEK	PPP SW Index	JPFCTSEK Index	USDSEKFIX=WM

Module B5: J.P. Morgan FX Value JPFCVA05 Index

This Module B5 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA05 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA05 Index
Bloomberg ticker	JPFCVA05 <index></index>
Index Currency	USD
Index Base Date	December 30, 2005
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	CZK	PPP CZ Index	JPFCTCZK Index	USDCZKFIX=WM
2	HUF	PPP HG Index	JPFCTHUF Index	USDHUFFIX=WM
3	MXN	PPP MX Index	JPFCTMXN Index	USDMXNFIX=WM
4	PLN	PPP PO Index	JPFCTPLN Index	USDPLNFIX=WM
5	RUB	PPP RU Index	JPFCTRUB Index	USDRUBFIX=WM
6	TRY	PPP TK Index	JPFCTTRY Index	USDTRYFIX=WM
7	ZAR	PPP ZA Index	JPFCTZAR Index	USDZARFIX=WM

Module B6: J.P. Morgan FX Value JPFCVA06 Index

This Module B6 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA06 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA06 Index
Bloomberg ticker	JPFCVA06 <index></index>
Index Currency USD	
Index Base Date	December 30, 2005
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	EUR	PPP EUAR Index	JPFCTEUR Index	USDEURFIX=WM
2	HUF	PPP HG Index	JPFCTHUF Index	USDHUFFIX=WM
3	PLN	PPP PO Index	JPFCTPLN Index	USDPLNFIX=WM
4	TRY	PPP TK Index	JPFCTTRY Index	USDTRYFIX=WM

Module B7: J.P. Morgan FX Value JPFCVA07 Index

This Module B7 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA07 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA07 Index
Bloomberg ticker	JPFCVA07 <index></index>
Index Currency USD	
Index Base Date	December 30, 2005
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	CAD	PPP CA Index	JPFCTCAD Index	USDCADFIX=WM
2	CZK	PPP CZ Index	JPFCTCZK Index	USDCZKFIX=WM
3	HUF	PPP HG Index	JPFCTHUF Index	USDHUFFIX=WM
4	MXN	PPP MX Index	JPFCTMXN Index	USDMXNFIX=WM
5	NOK	PPP NO Index	JPFCTNOK Index	USDNOKFIX=WM
6	PLN	PPP PO Index	JPFCTPLN Index	USDPLNFIX=WM
7	RUB	PPP RU Index	JPFCTRUB Index	USDRUBFIX=WM
8	TRY	PPP TK Index	JPFCTTRY Index	USDTRYFIX=WM

Module B8: J.P. Morgan FX Value JPFCVA08 Index

This Module B8 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA08 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA08 Index
Bloomberg ticker	JPFCVA08 <index></index>
Index Currency USD	
Index Base Date	December 30, 2005
Index Base Level	100.00
Index Live Date	June 27, 2016

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	CZK	PPP CZ Index	JPFCTCZK Index	USDCZKFIX=WM
2	HUF	PPP HG Index	JPFCTHUF Index	USDHUFFIX=WM
3	MXN	PPP MX Index	JPFCTMXN Index	USDMXNFIX=WM
4	PLN	PPP PO Index	JPFCTPLN Index	USDPLNFIX=WM
5	TRY	PPP TK Index	JPFCTTRY Index	USDTRYFIX=WM

Module B9: J.P. Morgan FX Value JPFCVA09 Index

This Module B9 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA09 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA09 Index
Bloomberg ticker JPFCVA09 <index></index>	
Index Currency USD	
Index Base Date	December 30, 2005
Index Base Level	100.00
Index Live Date January 26, 2017	

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	HUF	PPP HG Index	JPFCTHUF Index	USDHUFFIX=WM
2	MXN	PPP MX Index	JPFCTMXN Index	USDMXNFIX=WM
3	PLN	PPP PO Index	JPFCTPLN Index	USDPLNFIX=WM
4	RUB	PPP RU Index	JPFCTRUB Index	USDRUBFIX=WM
5	TRY	PPP TK Index	JPFCTTRY Index	USDTRYFIX=WM
6	ZAR	PPP ZA Index	JPFCTZAR Index	USDZARFIX=WM

Module B10: J.P. Morgan FX Value JPFCVA10 Index

This Module B10 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA10 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA10 Index
Bloomberg ticker	JPFCVA10 <index></index>
Index Currency USD	
Index Base Date	December 30, 2005
Index Base Level	100.00
Index Live Date	January 26, 2017

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	CAD	PPP CA Index	JPFCTCAD Index	USDCADFIX=WM
2	HUF	PPP HG Index	JPFCTHUF Index	USDHUFFIX=WM
3	MXN	PPP MX Index	JPFCTMXN Index	USDMXNFIX=WM
4	NOK	PPP NO Index	JPFCTNOK Index	USDNOKFIX=WM
5	PLN	PPP PO Index	JPFCTPLN Index	USDPLNFIX=WM
6	RUB	PPP RU Index	JPFCTRUB Index	USDRUBFIX=WM
7	TRY	PPP TK Index	JPFCTTRY Index	USDTRYFIX=WM

Module B11: J.P. Morgan FX Value JPFCVA11 Index

This Module B11 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA11 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA11 Index
Bloomberg ticker	JPFCVA11 <index></index>
Index Currency USD	
Index Base Date	December 30, 2005
Index Base Level	100.00
Index Live Date	January 26, 2017

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)
1	HUF	PPP HG Index	JPFCTHUF Index	USDHUFFIX=WM
2	MXN	PPP MX Index	JPFCTMXN Index	USDMXNFIX=WM
3	PLN	PPP PO Index	JPFCTPLN Index	USDPLNFIX=WM
4	TRY	PPP TK Index	JPFCTTRY Index	USDTRYFIX=WM

Module B12: J.P. Morgan FX Value JPFCVA12 Index

This Module B12 sets out the specific information pertaining to the J.P. Morgan FX Value JPFCVA12 Index.

Name of the Index	J.P. Morgan FX Value JPFCVA12 Index				
Bloomberg ticker	JPFCVA12 <index></index>				
Index Currency	USD				
Index Base Date	December 30, 1999				
Index Base Level	100.00				
Index Live Date	27 February, 2017				

Table 1: Currency List

i	Currency	Purchasing Power Parity (Bloomberg Code)	FX Tracker (Bloomberg Code)	USD Spot Rate (Reuters Page)		
1	AUD	PPP AS Index	JPFCTAUD Index	USDAUDFIX=WM		
2	CAD	PPP CA Index	JPFCTCAD Index	USDCADFIX=WM		
3	CHF	PPP SZ Index	JPFCTCHF Index	USDCHFFIX=WM		
4	EUR	PPP EUAR Index	JPFCTEUR Index	USDEURFIX=WM		
5	GBP	PPP UK Index	JPFCTGBP Index	USDGBPFIX=WM		
6	JPY	PPP JN Index	JPFCTJPY Index	USDJPYFIX=WM		
7	NOK	PPP NO Index	JPFCTNOK Index	USDNOKFIX=WM		
8	NZD	PPP NZ Index	JPFCTNZD Index	USDNZDFIX=WM		
9	SEK	PPP SW Index	JPFCTSEK Index	USDSEKFIX=WM		
10	USD	not applicable	not applicable	not applicable		

Appendix C: Purchasing Power Parity for previous years

This Appendix sets out the Purchasing Power Parity value for each Currency_i for each calendar year up to and including 2014 obtained by the Index Calculation Agent from the applicable Bloomberg Pages as at June 2016 when the Index Series was established; and the Purchasing Power Parity for year 2015 as at January 2017; and the Purchasing Power Parity for year 2016 as at January 2018.

Year	AUD	CAD	CHF	CZK	EUR	GBP	HUF	JPY	MXN	NOK	NZD	PLN	RUB	SEK	TRY	ZAR
1998	1.299	1.187	1.881		0.879	0.646		166.638	4.968	9.395	1.449	1.660		9.379	0.131	2.438
1999	1.297	1.191	1.872		0.884	0.653		162.036	5.634	9.329	1.435	1.740		9.294	0.202	2.570
2000	1.308	1.227	1.851	14.209	0.874	0.636	107.861	154.969	6.094	9.127	1.444	1.841	7.301	9.133	0.283	2.733
2001	1.326	1.220	1.838	14.211	0.866	0.626	110.569	149.701	6.305	9.173	1.474	1.859	8.316	9.342	0.428	2.877
2002	1.336	1.229	1.771	14.319	0.864	0.628	114.880	143.774	6.554	9.111	1.469	1.829	9.274	9.352	0.613	3.179
2003	1.355	1.226	1.773	14.013	0.868	0.640	120.334	139.790	6.800	9.098	1.498	1.838	9.868	9.321	0.772	3.297
2004	1.367	1.233	1.754	14.289	0.867	0.632	126.292	134.209	7.171	8.987	1.507	1.861	11.552	9.104	0.812	3.419
2005	1.388	1.214	1.743	14.316	0.855	0.636	128.594	129.552	7.127	8.896	1.535	1.869	12.736	9.378	0.831	3.493
2006	1.404	1.207	1.659	14.038	0.828	0.627	128.496	124.660	7.186	8.691	1.483	1.844	12.615	9.084	0.847	3.601
2007	1.427	1.214	1.601	13.945	0.820	0.645	131.338	120.298	7.348	8.776	1.506	1.843	13.984	8.886	0.864	3.818
2008	1.479	1.234	1.493	14.262	0.804	0.651	129.429	116.846	7.470	8.752	1.491	1.857	14.341	8.773	0.890	4.075
2009	1.441	1.202	1.468	13.903	0.794	0.656	125.593	115.497	7.430	8.959	1.470	1.865	14.019	8.918	0.912	4.348
2010	1.503	1.221	1.463	13.944	0.790	0.691	125.374	111.633	7.668	9.007	1.495	1.819	15.815	8.989	0.940	4.569
2011	1.511	1.240	1.397	13.398	0.780	0.700	124.821	107.454	7.673	8.985	1.486	1.828	17.346	8.853	0.992	4.774
2012	1.540	1.245	1.354	13.385	0.775	0.696	127.118	104.274	7.859	9.034	1.496	1.814	18.461	8.711	1.026	4.948
2013	1.450	1.215	1.322	12.907	0.760	0.692	126.429	102.743	8.015	9.049	1.411	1.778	20.478	8.713	1.080	5.167
2014	1.470	1.233	1.317	12.981	0.760	0.699	130.146	104.715	7.927	9.345	1.419	1.790	21.261	8.921	1.163	5.389
2015	1.462	1.252	1.246	12.789	0.750	0.688	130.553	102.516	8.401	9.675	1.443	1.762	22.572	8.915	1.241	5.516
2016	1.486	1.252	1.232	13	0.753	0.702	135.17	100.279	8.869	10.126	1.468	1.788	23.665	9.077	1.299	5.865